To Dr. Lettsom, with the Author's Complim

OBSERVATIONS

ON THE

DIFFERENT BREEDS OF SHEEP,

AND THE

STATE OF SHEEP FARMING IN SOME OF THE PRINCIPAL COUNTIES OF ENGLAND.

&c.

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DIFFERENT BREEDS OF SHEEP,

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DRAWN UP FROM A REPORT TRANSMITTED

TO

SIR JOHN SINCLAIR,

BARONET,

CHAIRMAN OF THE SOCIETY FOR THE IMPROVEMENT OF BRITISH WOOL.

BY

MESSRS REDHEAD, LAING, AND MARSHALL, STORE FARMERS IN THE COUNTIES OF ROXBURGH AND NORTHUMBERLAND.

TOGETHER WITH

THOUGHTS on the Different BREEDS of SHEEP, that ought to be Propagated in GREAT BRITAIN.—Remarks on the STATE o SHEEP FARMING in the Weſt Highlands.—ANALYSIS of a CHEVIOT SHEEP FARM.—An Account of the SHETLAND BREED of SHEEP.—A DESCRIPTION of the CULLEY BREED, and the MODE of MANAGING them, &c.

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M,DCC,XCII.

ADVERTISEMENT.

The Britiſh Wool Society, being anxious to procure as much information as poſſible, reſpecting the different breeds of ſheep in England, and the proper mode of managing them; they pitched on Meſſrs William Redhead of Chatto, Robert Laing of Plenderleith, both in the county of Roxburgh, and William Marſhall junior of Blindburn, in the county of Northumberland, ſtore maſters, or ſheep farmers, to make a ſurvey of the principal counties of England, diſtinguiſhed for the excellence of their breeds, and to report their obſervations thereon to the Society.—Accordingly theſe Gentlemen, accompanied by Mr Andrew Reid of Jedburgh, ſet out on the 30th of July, and returned on the 4th September following, having ſpent about ſeven weeks, (the utmoſt that the neceſſary attention to their own private concerns would admit of), in that important Journey.—That they have fulfilled the objects of their miſſion, as much as their time would admit of, will not be denied by any one who takes the trouble of peruſing the following pages.—At the ſame time it cannot be expected, that, in ſo ſhort a ſpace of time,

time, they could poſſibly have had it in their power, to collect all the information connected with ſo great an inquiry.—It is, therefore, earneſtly requeſted, that every reader of intelligence and public ſpirit, will have the goodneſs to tranſmit to Sir John Sinclair, Baronet, M. P. the Chairman of the Society, any additional facts or obſervations which may occur to him, on peruſing the Report, in order that accurate deſcriptions may be obtained, of ſuch of the different breeds propagated in England, as are truly valuable; and that the beſt mode of managing them may be completely aſcertained.

The Society at the ſame time determined, to make farther enquiries into the ſtate of ſheep farming in the Highlands, particularly on the weſtern coaſt; the eaſtern parts, and the center of the Highlands, having been previouſly ſurveyed by Mr Andrew Kerr.—Mr Roger Marſhall of Blindburn in Northumberland, and Mr Kerr Richardſon, of Morbattle in Roxburghſhire, were pitched upon for that purpoſe.—Unfortunately, however, Mr Marſhall (who is juſtly conſidered at the very top of his profeſſion as a ſtore farmer,) was taken ill on the road; and Mr Richardſon was prevented by that circumſtance, from completing the tour chalked out to him, in the manner he could have

ave wiſhed; but he has, in a great meaſure, xecuted the plan, and the obſervations which ccurred to him, will be found in the firſt num- er of the appendix.

As the following pages alſo contain deſcrip- ons of the Cheviot, the Culley, and the Shet- nd breeds; it is evident, that this paper fur- iſhes a greater variety of uſeful information, ſpecting the various breeds of ſheep in theſe ngdoms, than has ever been communicated the public, in any preceding publication.

ADDRESS

TO THE

PUBLIC,

Reſpecting the Proper Syſtem to be purſued for the IMPROVEMENT *of* BRITISH WOOL.

SIR JOHN SINCLAIR has much pleaſure, in communicating to the public, the following paper, containing the obſervations of three experienced and intelligent ſtoremaſters or ſheep-farmers, reſpecting the different breeds of ſheep, which are to be found in the ſouthern part of the iſland; and he thinks it a matter of the utmoſt conſequence to the intereſts of both kingdoms, that the facts therein contained ſhould be made known as much as poſſible, ſince, from every circumſtance which theſe gentlemen have reported, it ſeems to be indiſputably aſcertained, that the improvement of ſheep and wool is an object, *if poſſible*, of more conſequence to England, than even to Scotland; and, in particular, that the ſpreading of the Cheviot breed of ſheep, and the Cheviot ſyſtem of management, over the mountainous diſtricts of South, as well as of North Britain, are points well entitled to the greateſt exertions on the part of individuals,

and to every poſſible encouragement on the part of the public.

The attention of the country, however, ought not to be confined to any one particular ſpecies, nor will any perſon, who has ever had an opportunity of conſidering the ſubject, in the manner which its importance deſerves, ever entertain the idea, that only one breed of ſheep, ought to be propagated in theſe kingdoms. For, whether we take into our conſideration the hardy and plaſtic nature of the animal itſelf, the variety of ground on which it may be ſafely paſtured, the different ſorts of wool, which they may be made to produce, or the great variety of purpoſes to which that wool is applicable, it is evident, that nature intended, that there ſhould be a conſiderable diverſity of breeds, even in the ſame individual country. At the ſame time it would appear, that in theſe kingdoms, we may ſafely reſtrict ourſelves to 5 ſorts, which may be diſtinguiſhed by the names of the Marſh land,—the Arable land,—the Mountain,—the Hill,—and the Shetland breeds; ſince one or other of them may be maintained, on every ſort of ground or paſture we are poſſeſſed of, and will produce every deſcription of wool, that can poſſibly be required, in all our various manufactures.

I. MARSH LAND SHEEP.

In the rich meadows, or marſh lands of England, a particular ſpecies of ſheep has been brought to very great

great perfection. It is certain, that the very richneſs of the paſture itſelf, more eſpecially if aided by the care of the ſhepherd, would ſoon rear a breed, diſtinguiſhed by the ſize of the animal, and the length and quantity of its wool. In a fertile country, indeed, it can hardly be doubted, that QUANTITY *of wool*, and QUANTITY *of mutton*, or a large fleece, and a large carcaſe, are the proper objects of attention; whereas in a hilly or mountainous diſtrict, QUALITY *of wool* and QUALITY *of mutton*, are the principal points to be attended to. The Tees Water and Lincolnſhire breeds, before they were croſſed by ſmaller, and ſhorter woolled, ſheep, undoubtedly approached the neareſt to perfection of that ſort. In point of ſize and weight, they ſurpaſſed every other breed, and their wool was ſo long, as, in ſome caſes, to have gone to the length of, even, 22 inches. Theſe breeds, it is true, were not remarkable for fattening quickly, nor at any early age; but from the length of their limbs, and the ſize of their carcaſe, they were particularly valuable, as they could be driven over the deepeſt roads, and might be ſent to the London, or any other diſtant, market, at as cheap a rate, as an animal of half their ſize, weight, or value. There are many manufactures, alſo, that cannot be carried on to the ſame advantage, without having the wool produced by that breed, or of a ſimilar nature and quality. It is therefore of the utmoſt conſequence to preſerve them from being extirpated, and to bring them to perfection; both of which may be effected,

by

by a moderate ſhare of public attention and encouragement.

II. ARABLE LAND SHEEP.

The connecting ſheep farming with huſbandry, as it is now eſtabliſhed in many parts of England, and on the borders of Scotland, is a very important ſource indeed of national wealth. It is by far the beſt means of preſerving the fields of a country, in a perpetual ſtate of fertility and cultivation. For enriching land, the dung of ſheep is well known to be the moſt fertilizing of manures. The cultivation of clover and rye-graſs, joined to the turnip huſbandry, is unqueſtionably the ſureſt mode of cleaning the ground, from thoſe noxious weeds, by which its ſtrength is exhauſted; and if the turnips are devoured by ſheep on the fields, ſuch luxuriant crops of grain may afterwards be raiſed, as could not be produced, by any other means, on the ſame ground. The diſcovery, therefore, of the beſt breed for arable land, and ſpreading them in every diſtrict, calculated for the purpoſe, is a moſt important object, the extenſion of which cannot be too frequently inculcated. The quantity of wool, it is true, produced by this ſpecies of ſheep, is not equal to the Marſh land, either in point of weight or quality; yet it is conſiderable in itſelf, and anſwers many valuable purpoſes. But the great advantages which this breed poſſeſſes are theſe: 1. The great weight of the animal, which is more conſiderable than its

its appearance would denote, in conſequence of the excellence of its form. 2. The early age, at which it comes to perfection, being fit for the butcher even at two years old; conſequently as much profit is derived by the farmer, from its carcaſe at that age, as from other breeds at 4 or 5 years old; beſides, the breeder, in this caſe, generally alſo enjoys the profits of the grazier. Laſtly, The great quantity of fat, which this breed produces, is a matter of conſiderable moment. This ſort of ſheep, it may be truly ſaid, has been already brought *to perfection* by Mr Bakewell of Diſhley, Mr Paget and Mr Princeps of Leiceſterſhire, the Meſſrs Culleys of Northumberland, and other eminent breeders. It is certainly deſirable, to have this valuable breed propagated, in all the diſtricts, for which they are calculated. But there are difficulties in making them as general as they ought to be, in conſequence of the high prices, demanded by thoſe who are in the poſſeſſion of the beſt ſort, and the impoſſibility of obtaining from them, the Ewe as well as the Ram. Theſe obſtacles, however, muſt, by ſome means or other, be ſurmounted, either by ſome arrangement with the breeders, who have carried that ſort of ſheep to the greateſt perfection, or by encouraging others to rival them, who may be more liberal and communicative. It will be difficult, at the ſame time, if theſe obſtacles were overcome, to keep this breed within their proper ſphere, namely, arable diſtricts; and yet nothing can be more abſurd, or prepoſterous, than to ſuppoſe, that a fat animal, incumbered

bered with a great quantity of wool, can ever be calculated for a hilly, and far leſs for a mountainous diſtrict, or, that a boundleſs and profitable market can be expected, both for the wool, and the carcaſe of any particular ſpecies.

III. MOUNTAIN SHEEP.

It need hardly be ſtated, that ſheep is by far the moſt profitable ſtock for a mountainous country. It is the only animal, the goat excepted, that can feed there with advantage to its owner, and though in ſome countries, where they breed that ſpecies of goat, that carries fine wool under its coarſe hair, like the ſhawl goat, they may perhaps be led to prefer the goat to the ſheep, yet with us, in all ſituations, unleſs where there are nothing but rocks, covered with wood, the rearing of ſheep is found to be infinitely more profitable. Of the different breeds, which are kept on the mountainous diſtricts of this iſland, the *Cheviot* ſeems to be the beſt calculated of any perhaps hitherto known, for ſuch a paſture; uniting hardineſs, quality of wool, and excellence of ſhape and mutton, and poſſeſſing that length of limb and body, which enables them to travel without difficulty, either in queſt of food, or to a diſtant market. In general, however, in the mountainous diſtricts, both of England and Scotland, they have got into a ſpecies of ſheep, with coarſe, thin, looſe, and open fleeces;

hat the leaſt breeze expoſes the ſkin to the blaſt, and he ſlighteſt ſhower of rain penetrates to it. No ſpecies of ſheep can be more incompatible with a high ſituation; for a true mountain ſheep ought to have a *ſhort* fleece, that it may be more portable, a *thick* fleece, o prevent either ſnow or rain from penetrating it, nd a *fine* woolled fleece, to keep the animal warm; ine wool being infinitely warmer than coarſe, as ſhawl is proportionably ſo much warmer than a lanket. The great object in regard to the Cheviot reed, is, to diminiſh the quantity of coarſe, and to ncreaſe the quantity of fine, wool in the fleece, as uch as poſſible *. As to the prejudice, that fine oolled ſheep will not thrive in the high and mounainous diſtricts of Great Britain, but muſt neceſſarily degenerate, it might as well be ſaid, that, becauſe heſe kingdoms were, in ancient times, inhabited by a ace of ignorant and naked ſavages, who painted heir bodies, and had not knowledge enough to clothe hemſelves againſt the inclemency of the ſeaſons, it was

* The coarſeneſs of ſo conſiderable a part of the fleece is he principal defect of the Cheviot breed. That, however, may e remedied, by croſſing with the Hereford; for though croſſing n general, is not to be approven of, (becauſe it makes an uneual, or unſortable ſtock for the grazier, and a variety of ſorts of ool, to which the manufacturer ſo juſtly objects,) yet where the reeds reſemble each other much, which is the caſe with the heviot, and the Hereford, then, by a judicious ſyſtem of croſſg, and a little attention and perſeverance, any ſingle point to e wiſhed for, in regard either to the ſhape or the fleece, may be btained.

was therefore impoſſible, that the ſame countries could ever produce men, conſpicuous for their intelligence and capacity, and for their ſkill in every art, by which civiliſed life is ſo happily diſtinguiſhed *.

IV. HILL SHEEP.

It is well known, that wool may be divided into two ſorts, the one fit for combing, and adapted for ſtuffs, ſtockings, &c. the other for carding, from which, according to the nature of the material, either coarſe or fine cloth may be manufactured. Of the carding woolled ſheep, thoſe which are fed on downs or hills, covered with ſhort graſs, furniſh the wool beſt calculated for making broad cloth. England formerly produced a conſiderable quantity of that ſort, but from the extenſion of cultivation and improvement, it is diminiſhing every day, and unleſs the hilly diſtricts

* It is ſaid, that, as the goat is covered with coarſe hair, it neceſſarily follows, that mountain ſheep ſhould reſemble them in that particular, and that it is a ſign of ſtrength and hardineſs. But the hardineſs of the goat, does not depend upon its fleece, (which, by the bye, has, in many countries, a ſoft down under the coarſe hair, as is the caſe in particular with the ſhawl goat) but principally ariſes from the great thickneſs of its ſkin, in which reſpect, it greatly exceeds the ſheep. The juſtly celebrated Dr Monro, having agreed to take the trouble of anatomiſing all the different breeds of ſheep, collected by the Britiſh Wool Society, how far they differ from each other, in regard to thickneſs of pelt or ſkin, as well as in every other reſpect, will ſoon be accurately aſcertained.

ſtricts of Scotland are appropriated to that purpoſe, we muſt ſoon become almoſt entirely dependent on our neighbours for a moſt important article of manufacture. Fortunately, however, in conſequence of the late inquiries which have been made, reſpecting the improvement of wool, it has been aſcertained, that the Spaniſh breed of ſheep will thrive as well in this country, as on their native hills; and that their wool, ſo far as the experiment has yet been tried, inſtead of degenerating, rather improves, both in regard to colour and ſoftneſs, without growing coarſer in the pile. But, as the ſhape of the Spaniſh ſheep is greatly inferior to the Engliſh, it is a fortunate circumſtance to have it alſo aſcertained, that there are ſheep in England, producing, on a fair compariſon, as fine a pile of wool as even the Spaniſh. The fleeces of the beſt Ryeland and Morſe ſheep are unqueſtionably entitled to that character. The manufacturers, however, have always found, that the wool of theſe breeds, though to appearance as fine in the quality, yet could never be made into cloth of equal value, and, conſequently, was not entitled to the ſame price *.

But

* Mr Coles, an eminent manufacturer in Trowbridge, who ſcarcely ever before did any buſineſs, but in Spaniſh wool, has agreed, in the courſe of this year, to give the Morſe wool a fair trial. Perhaps, if it were manufactured in the French ſtile, looſer, and leſs milled, it might anſwer better, conſidering the weakneſs of the ſtaple at preſent, a defect which, it is to be hoped, will be remedied.

But the cauſe of that eſſential difference is now diſcovered. The Spaniſh breed of ſheep, it is well known, are kept on good paſture all the year round; and it is for the ſake of procuring them food, and not with any idea, as is abſurdly imagined, of keeping them always in the ſame temperature, that they are driven from one part of the kingdom to the other; whereas the fine woolled Engliſh breeds are either kept on commons, which are conſtantly overſtocked, or on fallows, where they have ſcarcely any food to ſupport them. The conſequence is, that the fleece is light, wants ſtrength and ſubſtance, and cannot properly be worked into ſtrong and ſubſtantial cloth. It is believed, alſo, that ſome improvements might be made in ſcowring fine Engliſh wools, which would make them ſpin more eaſily, and full or mill much better than at preſent *.

It is therefore of the moſt eſſential conſequence to the kingdom at large, to have theſe breeds, (in particular the Ryeland), ſaved from that deſtruction with which they are threatened; and ſome plan of management recommended to the attention of thoſe, who have

* The manufacturers complain of a kind of *gumminess* about Engliſh wool, which prevents its ſpinning and milling well. Perhaps this is owing to obſtructed perſpiration, in conſequence of the humidity and variableneſs of our climate. But to whatever cauſe it may be owing, the ſame proceſs by which the furrier cleans his ſkins, would free our Engliſh wools from any impurity of that nature, and in that caſe, it would ſpin and mill as well as the Spaniſh.

have the pure breed ſtill in their poſſeſſion, that would bring their fleeces to perfection. Giving them better food, and ſalt to enable them to digeſt it, ſeems to be all that is neceſſary; and when the wool of Hereford and of Shropſhire begins to fetch as high a price as the Spaniſh, (or from 4 s. to 5 s. a-pound), the propagation of theſe breeds muſt become general; as it will ſoon appear, that it tends as much to the intereſt of the farmer as that of the public.

Among the hill ſheep, the Southdown breed is alſo entitled to peculiar attention; its hardineſs is almoſt proverbial *; indeed, otherwiſe it could not exiſt in the expoſed ſituations where they are kept at preſent; and there are many parts of the iſland where they would probably anſwer, perhaps better than even the Hereford, though their wool is not yet ſo valuable. In regard to this part of the ſubject, it may be added, that, in ſo far as can be judged from any experiment yet tried, it is believed that the Southdown, the Hereford, and even the Spaniſh, would thrive in mountainous as well as hilly diſtricts, were they bred upon the ſpot, and properly attended to by the ſhepherd; but in the wide ranges of a mountainous country, great care and attention cannot be expected; and hence ariſes the neceſſity, of making a diſtinction, between the breed to be propagated in the hilly, and in the mountainous parts of this kingdom.

V.

* Sheep, it is ſaid, would be brought to perfection, were it poſſible to unite, in the ſame animal, the fleece of the Spaniſh, the carcaſe of the Bakewell, and the conſtitution of the Southdown breed.

V. SHETLAND SHEEP.

The beſt ſpecies of the Shetland breed may undoubtedly be conſidered as a diſtinct ſort, which ought to be carefully preſerved, and brought to its greateſt poſſible perfection. Its wool is a medium between the combing and the carding wools; and being applicable to finer purpoſes than either, namely, the moſt beautiful ſtockings, ſhawls, gown, and waiſtcoat pieces, it is much more valuable than any other ſpecies. Its principal defect is, that many of the ſheep have a number of black hairs mixed with the white. But there are many of that ſort of ſheep, whoſe wool is of the pureſt and moſt dazzling white, ſurpaſſing any thing of the kind that can be produced from any other country. The ſkin of this breed, alſo, can be converted into a ſpecies of fur, not to be ſurpaſſed by any other, either for warmth or beauty.

Such are the different breeds of ſheep *, which, after

* The length of the wool of theſe different breeds, ought certainly to vary. Perhaps the average length of each, at its full growth ought to be as follows:

1. Marſhland ſheep, - - - 16 Inches
2. Arable land ſheep, - - - 8
3. Mountain ſheep, - - - - 4
4. Hill ſheep, - - - - - 2

—In regard to the Shetland, (which is properly a medium ſort of wool,) from 5 to 7 inches is the length that would be moſt deſirable.

after a conſiderable degree of attention to the ſubject, I would particularly recommend to the people of this country, and which, if they were brought to perfection, and ſpread over every diſtrict, according as they are beſt calculated for it, Great Britain would ſoon become infinitely richer, than it is even at preſent. This being a matter which is to be brought under the conſideration of Parliament, early in the courſe of the preſent ſeſſion, I thought it adviſable to take the firſt opportunity, to throw out ſome general ideas upon the ſubject. It is evident, that, by eſtabliſhing a proper ſyſtem of ſheep farming, and connecting it with huſbandry, agriculture may be brought to an incredible height of perfection; and it will hardly be diſputed, that the fleeces of the country furniſh the materials of our greateſt and moſt valuable manufacture *. The Britiſh Wool Society, by calling the attention

* There is one point of view, in which the ſubject has never been conſidered; namely, that, by covering our hills and mountains with fine woolled ſheep, they may be made nearly as valuable to the community, as even arable land. It may be put hypothetically thus.—Let us ſuppoſe, that the produce of arable land, is, at an average, five guineas *per* acre. Let us ſuppoſe on the other hand, that hill grounds may be improved, ſo as to keep two ſheep *per* acre; that every ſheep produces $3\frac{1}{2}$ lib. of fine wool; and that every lib. may be brought to be worth 3 s in the fleece;—And laſtly—that the value of fine wool is quadrupled by the art of the manufacturer.—Each acre therefore, would produce 7 lib. of wool, which would ſell for a guinea, and would be manufactured into articles worth

attention of the public, to the improvement of this important article, have certainly done much ſervice to their country. Under their patronage, the greater part of the iſland has been ſurveyed, by perſons ſkilled in the management of ſheep, whoſe obſervations they are circulating over the kingdom. They have eſtabliſhed many important facts; they have proved, that the fineſt breeds of Spain, or of England, will thrive in the wildeſt of the Cheviot hills, and that very fine woolled breeds may be propagated, in the moſt mountainous diſtricts of Scotland.—But unleſs this object is thought worthy of public attention and encouragement,—unleſs a board of agriculture is conſtituted, for the ſole purpoſe of ſuperintending the improvement of the ſheep and wool of the country, and other objects connected, either with the cultivation or the paſturage of the ſoil, the exertions of any private ſociety muſt ſoon ſlacken, and its labours become uſeleſs and inſufficient; whereas, under the protection of

4 guineas—and if the ſheep produce lambs worth half a guinea a piece, the community would then receive 5 guineas *per annum*, from each acre of hill paſture, as well as from each acre of arable ground, and it would be of little conſequence to the country, whether the produce is in wheat or wool, provided the one could be converted into as much value as the other.—This calculation, it muſt be acknowledged, is merely hypothetical, and rather favourable to the articles produced by paſture, but at the ſame time it ſhows the immenſe advantages that may be derived by improving our waſte lands, and covering them with fine woolled breeds of ſheep.

of the government of the country, and the ſuperintendance of a board of agriculture properly conſtituted, (more eſpecially if formed of perſons, who *gratuitouſly* devoted their ſervices, to promote ſuch valuable and truly national intereſts,) every field would ſoon be cultivated to the beſt advantage, and every ſpecies of ſtock brought to the greateſt poſſible perfection *.

Here

* A material point for quickly propagating the different breeds, which were thought beſt entitled to attention, would be, to appoint *public agents* at the places where they are found in the greateſt perfection, for the purpoſe of encouraging the farmers in the neighbourhood, to attend more to the improvement of their ſtock, and of correſponding with all thoſe, who might be deſirous of purchaſing ſuch breeds; and in order alſo, to contrive the means of ſending them at as little expence, and with as little difficulty as poſſible, to the places for which they are deſtined.—It was only by means of following ſuch a plan, that the knowledge of the Cheviot breed, has been ſo rapidly extended all over Scotland.—If every perſon, who wiſhes to try a particular breed, is obliged to go to the ſpot himſelf, or to ſend perſons to bring a ſmall parcel with them, to a conſiderable diſtance, the expence and trouble is ſo great, that few will think of attempting it; but if a perſon of ſkill and character is appointed to act as a common agent in the buſineſs, between the buyer and ſeller, it will be in his power to accommodate every one with the ſtock they want; and by ſending large flocks under the managemeat of ſkilful drivers, to every quarter where they are wiſhed for, leaving each parcel at the place neareſt to the ſpot where the purchaſer reſides; it is incredible, by means of ſuch an arrangement, with what eaſe and at what a trifling expence, any particular breed might be ſpread over a country.—A flock of 50 rams and 100 ewes were ſent, by the Britiſh Wool Society, from the borders of England and Scotland

Here alſo, it may be proper to take notice of an opinion which ſome have entertained, that the improvement of the different breeds of ſheep in the country muſt neceſſarily be attended with ſo much profit to their reſpective owners, that it is idle for the public to put itſelf to any trouble or expence, about a matter, which may be left entirely to the exertions of the farmer himſelf, who will not neglect what muſt tend ſo eſſentially to promote his own perſonal intereſt.

Such an idea, however, is perfectly erroneous. Had it been well founded, the ſheep, in theſe kingdoms, would have arrived at perfection ages ago. It is certain, that the farmer, by meliorating his wool, will get a better price for it, (though proportionally not ſo much, as he would do, were the commerce of that article perfectly free and unreſtrained), but his profit is trifling in compariſon of the great advantages, which the public muſt derive from having ſo valuable a

land to Caithneſs, (a journey of 350 miles,) without the loſs of a ſingle ſheep. They were divided into ſmall parcels, conſiſting of a ram and 2 ewes, among from 40 to 50 different people, who were diſpoſed to try them in every poſſible ſituation. The flock kept one route, and every individual got his ſhare left for him, at, or as near as could be contrived to, his place of reſidence. Had each of theſe perſons gone ſeparately to the Cheviot hills, and ſent his parcel north by a ſeparate driver, the charges would have been enormous. Whereas by following the above plan, the whole expence of driving them 350 miles including tolls, ferries, maintenance, ſhepherd, &c. only came to 1 s. 1½d *per* head.

a material of manufacture, as fine wool, in perfection and abundance; whilſt at the ſame time, it is propoſed, that the farmer ſhould be at the ſole expence and riſk of the improvement *.

It is impoſſible alſo, for any one, who has not had ſome experience in ſuch an undertaking, to have any conception of the difficulties attending ſo great an operation, as that of bringing about a revolution in the ſyſtem

* Changing an entire flock is attended with more trouble, expence, and riſk to the farmer, than can well be imagined; particularly if there is a great demand for the breed, that is to be purchaſed.—The breed, to be parted with, always ſells to great diſadvantage. The new breed is not only bought dear, but does not always agree with a change of paſture, which occaſions a conſiderable loſs. If the ſyſtem of croſſing were adopted, many years might elapſe, before any thing material was done; and the farmer would tire of experiments, from which he derived only a trifling or gradual profit. In ſhort, if it is a great and important object for the public, to have wool in perfection and abundance, it ought to be at the expence of bringing every valuable breed, the country is poſſeſſed of, to perfection;—of ſpreading them over the country, in their utmoſt purity, as quickly as poſſible,—and of extirpating every inferior ſort. Nor would the expence be great. A penny *per* pound on foreign wool imported, (a trifling duty, which ſeveral reſpectable manufacturers have aſſured me, they would not object to,) would produce from 8,000 l. to 10,000 l. a year, and would be ſufficient for the purpoſe. The produce of a tax on pigeon houſes, ſo noxious to the farmer, might be laid out, in promoting the general intereſts of agriculture; or a tax, either on dogs, or on weights and meaſures, might be impoſed, for objects of that nature, as a uſeful regulation of police, as well as a ſource of income.

ſyſtem of ſheep farming, were it confined even to the mountainous diſtricts of a great country. It is neceſſary for that purpoſe to ſatisfy—the *breeder*, that a change of breed will ſuit his paſture, and will be more profitable than the one he is accuſtomed to—the *grazier*, that he will derive more advantage by purchaſing that ſort of ſheep, for the purpoſe of fattening it *—the *butcher*, that the carcaſe will be as much in requeſt with the cuſtomers he ſerves—the *conſumer*, that the mutton is not inferior in point of taſte and flavour—the *currier*, that the *pelt* or ſkin will anſwer his purpoſe better—the *wool-ſtapler*, that more profit may be expected from ſorting the fleeces they produce—and the *manufacturer*, that the wool of the breed recommended can be worked up into better cloth, for which there muſt always be a greater demand, and a better price at the market.—To overcome the prejudices of all theſe different deſcriptions of people, and to give them new light and freſh information upon topics, which, they are apt to believe, they muſt underſtand better than any other perſon, is an operoſe and troubleſome buſineſs, which however important (and none can equal it in point of value) can never be effected, without an expence, to which the public alone is equal; and without a degree of publicity and perſeverance, which can only be expected, from a great national eſtabliſhment, conſtituted for that ſpecial purpoſe.

* The Yorkſhire graziers may be aſſured, that their prejudices, in favour of the black faced, and againſt the Cheviot breed, are perfectly groundleſs, the latter being as hardy, and more profitable than the former.

OBSERVATIONS

RESPECTING

THE DIFFERENT BREEDS OF SHEEP, &c.

HAVING received the neceſſary directions from Sir John Sinclair, Bart. the Chairman of the Britiſh Wool Society, and a plan of our route, together with letters of recommendation, to ſeveral friends to the improvement of Britiſh Wool on the road chalked out to us, we ſet out from the neighbourhood of the Cheviot Hills, near which we reſide, on the 30th July 1792, by the way of Carliſle, (purpoſing, in the firſt place, to view the Weſtern Counties of England); and returned, by the way of Newcaſtle, on the ſubſequent 14th of September.—The following, are the principal facts and obſervations, which, occurred to us in the courſe of that journey.

CUMBERLAND AND WESTMORLAND.

In our way from Carliſle to Mr Pattiſon's of Mallerby, near Penrith, we ſaw ſome of the ſheep kept upon the commons, in that part of the country. They are generally horned, dark faced, remarkably ill ſhaped, and coarſe woolled. Mr Pattiſon being from home, we called for, and examined his ſhepherd, who informed us,—that his maſter kept about 20 ſcore of ſheep;—that he ſold his four year old wedders at 13s. *per* head, after being ſhorn; their wool at 7s. *per* ſtone,

(16 lib). and the lamb wool at 6d. *per* lib. (it being here the practice to ſhear lambs);—that he had this day (2d Auguſt) ſeparated the lambs from their dams;—that the former are brought for a fortnight to graze in the paſtures, or incloſed grounds, and are then ſent to the fells, for about another fortnight, when they are ſalved for wintering. It being now dark, we had no opportunity of going out to the mountains, to inſpect Mr Pattiſon's flock.

From Penrith, where we ſtay'd all night, we went to Lowtherhall. Lord Lonſdale, unfortunately, not being at home, we called for his ſteward, who informed us, that his Lordſhip's flock conſiſted of between 2000 and 3000, of different ages, all of the coarſe woolled ſort;—that they ſell none;—kill their mutton, about 8 or 10 years old, after being brought in from the mountains, and fattened in the park;—ſell the wool at 6s. 6d. *per* ſtone;—in the winter, give hay, but no turnip, to their fattening ſheep;—weight from 14 to 20 lib. *per* quarter.

From Lowtherhall, we croſſed over to Uls-Water; and, along the Cumberland ſide of the lake, to Patterdale, and thence, over the hills, to Windermere; a moſt delightful ride, affording ample ſcope to a picturesque pen. Still ſaw the ſame kind of ſheep. A general idea ſeems here to prevail, that no other breed would anſwer theſe mountains; but we cannot help being of opinion, that the hills bordering on the water, and particularly thoſe in the lower part of it, are very ſuitable for keeping fine woolled ſheep, for which a dry and ſhort graſſed paſture (ſuch as is to be met with in the greater part of theſe hills) is peculiarly adapted.

It is, however, to be regretted, that moſt of theſe hills are poſſeſſed in common, which, in our opinion, from a variety of circumſtances, muſt prove an almoſt unſurmountable bar to improvement in ſheep farming. Such gentlemen, therefore,

fore, as would direct their attention and influence, to promote a diviſion of theſe commons, would deſerve well of their country. For, though obloquy and abuſe are, ſometimes, on theſe occaſions, at firſt thrown out by unreflecting people, attached to old cuſtoms and prejudices, againſt the promoters of ſuch diviſions, yet the experience of a few years generally does ample juſtice to their patriotiſm and their foreſight.

We do not conſider the mountainous nature of theſe counties, any good objection to the keeping of better, and finer woolled ſheep, than thoſe, with which they are at preſent ſtocked; on the contrary, we are of opinion, that the finer and cloſſer the fleece, the better defence will it afford, againſt the inclemency of the weather. On the Cheviot and border hills, a much ſuperior ſheep, both in ſize and ſhape, as well as in the quality of the fleece, is ſucceſsfully bred and reared; and, though ſome of the Cumberland and Weſtmorland hills, are ſteeper than thoſe on the Borders, yet we conſider the Cheviot breed, to be fully as capable as any other ſheep, to climb the ſteepeſt hills; whilſt, from the cloſeneſs and ſuperior quality of their fleeces, they are much better calculated, than the preſent ſort in theſe two counties, to endure the hardſhips of a bleak and mountainous diſtrict.

From Ambleſide, which is towards the head, we went along the ſouth ſide, of the delightful and much adorned Lake of Windermere, to the Biſhop of Landaff's new ſeat, at Calgarth Park.

Having previouſly forwarded a letter to the Biſhop, from Ambleſide, and received a polite anſwer, we found him waiting for us on horſeback.

We accompanied his Lordſhip round his farm, inſpected his flock, and converſed with his ſhepherd; and, on returning, found Mr Barton, parſon of Bowneſs, a conſiderable and intelligent farmer in the neighbourhood, who had been very obligingly aſked by the Biſhop, to meet us on the occaſion.

We

We had previouſly got the queries, circulated by Sir John Sinclair, Chairman of the Society *, anſwered by the ſhepherd, with the Biſhop's aſſiſtance, reſpecting the breed of that neighbourhood; but his Lordſhip wiſhed to have theſe anſwers reviſed by Mr Barton, which was done accordingly; and,

* The following are the Queries, circulated by Sir John Sinclair, in this and in foreign countries, with the view of collecting materials for drawing up a complete hiſtory of *The Sheep*. In the courſe of our tour, we have uniformly endeavoured, to obtain the beſt deſcription in our power, of the different breeds we met with, in the order of theſe Queries.

1. Is the breed, ſo far as it can be aſcertained, a native, or a foreign ſpecies? Is it wild, or completely domeſticated? Is it hardy or delicate?

2. Is it ſuppoſed to be pure, or has it been croſſed with other breeds? In what reſpects, does it principally differ, in its ſhape and appearance, from other ſheep? Whether in regard to height, length, breadth, or otherwiſe?

3. What is the average weight of the whole carcaſe, the weight of the fore and hind quarters, the number of its ribs, &c.

4. What is the nature and quality of its mutton?

5. What is the average weight, and average value of its fleece?

6. What is the nature, length, colour, and price of its wool, and the purpoſes for which it is beſt calculated?

7. At what age does the breed arrive at perfection, and what is the average quantity of its tallow, when fat?

8. What, in general, is the number of Lambs at each birth? At what ſeaſon of the year do they lamb? And are the Lambs well covered with wool when born?

9. What is conſidered to be the beſt method of managing the breed? To what food are they moſt accuſtomed, or what ſeems beſt to agree with them?

10. To what ſorts of diſeaſes is the breed particularly ſubject? And how can they be beſt prevented or cured?

11. Are there any methods adopted, to improve the fleece, either in quality or quantity, and what are found the moſt advantageous?

12. How often is the fleece clipt? And is there any difference, in regard to weight or quality, between the ſummer and winter fleece?

and, from the whole, we have been enabled to draw up, the following deſcription, of the prevailing breed, in the mountains of Cumberland and Weſtmorland.

Deſcription of the Cumberland, and Weſtmorland Breed of Sheep.

The breed is native, and is ſufficiently domeſticated for a mountainous diſtrict. Its hardineſs will beſt appear, from ſtating, that the loſs by death is computed, in moderate years, at about 2 *per cent.*; and, in a hard winter, at about 7. In ſome places, however, the loſs is eſtimated higher, being, according to Mr Barton, about 4 *per cent.* in moderate, and 10 *per cent.* in hard winters.—The breed, in general, is pure, and not croſſed; yet ſome farmers have croſſed with larger rups from Kentmore, and other places, of a ſtill coarſer wool.—They feed to about 14 lib. *per* quarter; difference of weight in the quarter, or the number of ribs, not attended to.—Nothing more excellent than the mutton, and ſeldom killed till 5 years old.—Killed, fat from the mountains, about the month of September, when the beſt is ſold at 3 d. *per* lib.; although, in the ſpring, mutton ſells ſo high as 6 d. or 7 d.*—The average weight of the wedder fleece, of 4 years old, about 4 lib. and the price 6 d. *per* lib.—Mr Barton obſerved, that the price of wool was at preſent much higher than formerly, and that the weight of the ewe fleece, as well as of the younger ſheep, was leſs than that of the wedder, in a proportion of about 6 to 4.—The wool is chiefly white; in length about 3 inches; and its nature will be beſt judged of from the ſample got from the Biſhop's ſhepherd, here referred to, and marked No. 1. It is principally manufactured at Kendal, into

* This, we obſerved, might be remedied, by cultivating turnips, for which the land ſeemed very ſuitable; and there is plenty of lime at hand.

into, what is called, Kendal cottons, Linſey-Woolſies, &c.—The breed arrives at perfection at five years old; the wedders, when killed from the commons, produce about 10 lib. of fat; when from the fogs or paſtures, about 14 lib.; the ewes have ſomething leſs.—The ewes, of this breed, produce only one lamb in the month of April, generally well covered when lambed. Some ewes, when well kept during winter, have two lambs.—There is no particular mode of management. The wedders were formerly uſually drawn, or ſelected from the flock for ſale, at five years old, but now moſtly at four; the bad ewes are diſpoſed of ſooner. No food is given in this country to the ſheep but graſs and hay, and ſometimes a few turnips.—The land, in general, is healthy, and little rot, excepting in low ſwampy commons, and in very wet winters. The lambs are ſubject to what is called the *Black-water*, (with us the ſickneſs). The beſt cure hitherto found out, or practiſed, is, exerciſe, by chaſing them about; the ſame method that is adopted with us in the neighbourhood of the Cheviot.—No attention has hitherto been paid to the improvement of the fleece.—The fleece is clipt only once a year, in the beginning of July.

Such, in general, is the nature of the ſheep bred in the mountains of this neighbourhood. There is, however, a ſmall breed called *the Hardwicks*, weighing only 8 lib. per quarter when fat, which are kept on a high and extenſive diſtrict, reaching from the head of Windermere, to Whitehaven. This breed is ſo hardy, that though they remain on the mountains during the winter, yet no hay is given them, whereas the other breed is wintered in the low lands, at 1s. 8 d. *per* head. Mr Barton mentioned, that when the Hardwick ewes were croſſed, as ſometimes was the caſe, by larger tups, the fleece yielded a greater quantity of wool, but not ſo fine,

fine, and that the wedders produced from that croſs, weighed about 10 lib. *per* quarter *.

The Biſhop has lately introduced Mr Bakewell's breed, into this part of the country; and the lambs ſhewn us, as the produce of that croſs, appeared much ſuperior to thoſe of the pure country breed. He has likewiſe tried a croſs of the Leiceſter ewes, with a Spaniſh ram, and No. 2. and 3. are ſpecimens of the wool of each kind. His Lordſhip appears to be an anxious and attentive farmer, is buſily engaged in clearing and improving his new eſtate upon the Lake, and has begun to water his meadow ground, and to lime his paſtures in the face, with conſiderable ſucceſs. He is particularly fond of the potatoe crop, which, though cultivated here in the rougheſt manner, he finds to pay remarkably well.

* Sir John Sinclair received, from a correſpondent in the north of England, the following account of the origin of the Hardwick breed. About fifty years ago, a veſſel was ſtranded on the coaſt of Cumberland, that accidentally had on board, ſome of the native ſheep of Scotland, which were put aſhore, and were purchaſed by the farmers who lived at Waſdalehead, in the neighbourhood of Keſwick. It was ſoon diſcovered that they poſſeſſed an inſtinct of foreſeeing an approaching ſtorm; that they faced the coming blaſt; and taking the moſt expoſed ſide of the mountain, were never liable to be covered by the ſnow. The inhabitants of Waſdalehead, thought this breed ſuch an acquiſition, that they wiſhed to preſerve it entirely to themſelves; and came under an obligation to each other, that none of them ſhould ever ſell a ram, and never above five female lambs in a ſeaſon. Means, however, were found, by ſmuggling and otherwiſe, to get the better of this ſhameful ſtipulation; ſo that they are now very common in ſome of the mountainous diſtricts of Cumberland and Weſtmorland. There, they are known under the name of *the Hardwick breed*; and, though in a great meaſure extirpated in Scotland, yet may be found in very great perfection, in the northern parts of England. Croſſed by Cheviot, or even Spaniſh rams, they may make a very valuable breed, of clothing woolled ſheep, for a mountainous diſtrict.

well. They ſell at 4 s. *per* buſhel, and make a conſiderable return *per* acre. Such as he cannot diſpoſe of otherwiſe, he gives to his horſes, upon which they thrive remarkably well without corn; and he calculates that there is thereby a ſaving of oats equal to the 4 s. *per* buſhel.

The Biſhop is diſtinguiſhed by an eaſy, methodical, and buſineſs-like manner, of diſcuſſing a ſubject, and explaining his opinions. When a ſpirit for improvement is thus united to ſtrong natural talents, and to the accidental power and opportunity of bringing them into action, the country around muſt neceſſarily derive very important benefits, from ſo valuable a character.

We took occaſion to recommend to the Biſhop's attention, both for his potatoe and his turnip crops, the drill huſbandry, ſo univerſally and ſucceſsfully practiſed, in the counties of Roxburgh and Berwick, but not yet introduced into this diſtrict, although it contains a good deal of land, well adapted for ſuch huſbandry. The turnip crop, as a winter and ſpring food, is of the greateſt conſequence, when it is properly cultivated in a ſheep country.

Taking leave of the Biſhop, we croſſed over to Mr Curven's on the Lake, who ſhewed us a few ſheep paſturing on the iſland in which his houſe is ſituated, of the country kind, improved in their appearance, by the goodneſs of the paſture, and one of them, we remarked, very much reſembling the Cheviot breed. Having received every mark of attention and civility from Mr Curven, we next proceeded to Kendal, where we got the following account of the woollen manufactures carried on there.

1. A coarſe narrow cloth or ſtuff paſſing by the name of *Kendal Cottons* or *Coatings*, and made from the coarſe wool of Cumberland and Weſtmorland, &c. is there manufactured. It ſells from 9 d. to 1 s. 6 d. *per* yard, the general run about

1 s.

1 s. 2 d.—Wove chiefly by women, who earn about 5 s. *per* week, beſides doing their houſehold work—dyed blue and other colours, and partly kept in the natural colour—go moſtly to America, and the Weſt Indies, for ſailors jackets, and clothing the negroes.

2. *Linſey-Woolſies*, made of woollen waft and linen warp, and *Jerſies*, of worſted warp and wheeling waft; ſold in the country for mens veſts, and womens petticoats and aprons, from 10½ d. to 2 s. *per* yard.

3. Stockings of ſkin wool from Leiceſterſhire, Derbyſhire, &c. knitted of three threads, by men, women, and children, who are put to this work as early as at four years old.

4. Fancy veſts, ſome made ſolely of Spaniſh wool, and others of Spaniſh wool and cotton, from 2 s. to 10 s. the piece.

Before quitting Cumberland and Weſtmorland, we cannot help obſerving, from what we ſaw of the ſheep and paſture in theſe two counties, that the greateſt improvement, that could take place there, would be, to introduce a new and better breed of ſheep, ſuch as the Cheviot breed, for which we think the paſture is perfectly ſuitable; and if the experiment were found to ſucceed, (of which we can entertain no doubt,) then the preſent very indifferent kind ought to be completely extirpated, in place of attempting their improvement by croſſing.

LANCASHIRE.

In our way from Kendal to Lancaſter, by Millthorp, Dalton, &c. we ſaw a better kind of ſheep, both in point of ſhape and quality of wool, which go by the name of *the Silverdale breed*. Agreeably to our information, that breed is native, at leaſt has not been lately introduced. They paſture on very rocky limeſtone land, and their wool ſells at 12 s. *per*

ſtone (14 lib.) Though better than thoſe we ſaw in the two former counties, we ſtill think them inferior to the Cheviot breed. At the ſame time we conſider the paſture as ſuited to the keeping of better ſheep, and might anſwer even for the Spaniſh, who, it is ſaid, feed much on limeſtone ground.

From Lancaſter we went to Mr Cawthorne's ſeat at Wireſide, and thence to Garſtang all night.—At Mr Cawthorne's requeſt, we returned to Wireſide in the morning, and accompanied him about 10 miles up Wiredale, to his farm in the mountains—ſaw his and his tenant's ſheep, which paſture on the commons; and found them much the ſame, both in regard to ſize and ſhape, with the black faced kind of Cumberland and Weſtmorland. But the wool is of a better quality; and ſold this year (1792) at 9 s. 3 d. *per* ſtone (14 lib.) being 1 s. 3 d. advanced from laſt year's price.

The tenants here, too, ſhear their lambs, and ſell their wool at 9 d. *per* lib. but Mr Cawthorne does not follow that practice, and thinks his lambs thrive better on that account. We were informed by the tenants, that they had tried a croſs with the Silverdale tups, but found it did not anſwer. In conſequence of our recommending a trial of the Cheviot breed, (which we thought ſuitable for the hills and paſtures ſhown us), Mr Cawthorne and his tenants readily agreed to make the experiment, and have accordingly ordered 100 to be ſent next ſpring, along with a ſhepherd of the country, to take the charge and management of them; a thing, by the bye, which ought always to accompany their firſt introduction into any country, as tending to give the experiment a fairer and better chance of ſucceeding, when not only the breed itſelf, but alſo the proper mode of managing them, is, at the ſame time, introduced into a country *.

Obſerving

* This, is not the firſt experiment that Mr Cawthorne has brought

Obſerving the land, in the courſe of our return, by the ſide of the Wire, much adapted to the turnip huſbandry, we took occaſion to recommend to Mr Cawthorne, the propriety of ſetting an example to his tenants, by introducing the culture of turnips, which, at the ſame time, that they would enable him to feed off his ſheep and cattle ſooner, would tend much to improve his eſtate. Mr Cawthorne, who ſeems deſirous of promoting every improvement, moſt readily entered into the idea; and, as he wiſhes not merely to ſpeculate, but to act, he deſired us to procure, and ſend him, at the enſuing term, a plowman converſant in the turnip huſbandry, from the neighbourhood where we reſide.

From Mr Cawthorne's we proceeded to Preſton; and called on Mr Hook Campbell, (the Lord Lyon, or, King at Arms of Scotland,) who behaved with much politeneſs, and was particularly well diſpoſed to give us every aſſiſtance in his power. He ſhewed us ſeveral ſpecimens of the Herefordſhire wool; to which breed of ſheep, after trying various others, he had paid

brought from the north. About five years ago, he got five of the Scotch Highlanders, uſually called Kyloes, ſent him by Mr Hall of Fordhill, which were put on the commons, under the charge of a herd ſent along with them, and which now amount to 50, beſides a few of the worſt ſold off, when three years old, at 4 l. *per* head. He has had about 12 calves this ſeaſon, and expects about 20 next year. They are in ſurpriſing good condition to be fed conſtantly in the hills, without ever being brought into the Lowlands, and only getting a little hay during the ſtorms of winter.

There is a *benty graſs* upon ſome of the hills, very much ſuited to the feeding Kyloes; and Mr Cawthorne propoſes to increaſe his ſtock, by breeding to the amount of from 200 or 300. The tenants, who have likewiſe all an intereſt in the commons, (on which they are allowed to put any number of ſheep or cattle they chuſe, the propriety of which may be queſtioned,) were very much afraid that their hill paſtures would have been injured, when Mr Cawthorne firſt formed the idea of introducing Kyloes; but they now admit, that they have rather freſhened them, and conſequently done them ſervice.

paid particular attention, having once had a conſiderable farm ſtocked with them. They are good feeders and milkers; and the wool ſells this year at 33 s. and ſome at 34 s *per* ſtone, (12½ lib.)

Mr Campbell never houſed any of his ſheep, a practice followed in Herefordſhire, nor did he think it any way neceſſary or uſeful. His ſheep notwithſtanding, uſed to be remarked for the good quality of their wool, of which not more than a thirteenth part went to *breech*. We were much obliged to Mr Campbell for ſome uſeful hints regarding the purchaſe of ſheep in Herefordſhire.

Mr Campbell ſpoke of the Dorſetſhire breed lambing twice a year, when well kept; but on inferior *keep*, they lamb only once, and the quantity of wool is alſo diminiſhed.

In our way from Preſton to Middlewick in Cheſhire, by Wigan, Warrington, and Northwich, we obſerved no ſheep.

CHESHIRE.

The dairy is the chief object of this county. We viſited that of Farmer Hulſe, at Croxtonhall, near Middlewich, where they milk upwards of 80 cows. We ſaw them when milking in the evening.

They were very fine deep made cows, and in great condition. One woman milked 10 cows, and the farmer's wife attended to ſee it clean done. They are milked twice a-day; ſome of them giving from 16 to 18 quarts at a time, but the general run is about 12 quarts. Three cheeſes a day, weighing, at an average, about 80 lib. each, are made here during the height of the graſs. We were ſhown a remarkable large cheeſe, meaſuring 28 inches over, and 12 deep, with the royal arms upon it, appearing, from the colouring, like embоſſing in wood, and intended as a preſent to the Prince

of

of Wales, which, we were informed, would, even at ſeven years old, weigh 12 ſcore, or 240 lib.

Beſides his milch cows, Mr Hulſe keeps and fattens every year, about the ſame number of black cattle, and, generally, about 100 ſheep. He ſells his early lambs at the Manchester market, for a guinea each, and feeds off, and ſells the ſheep in autumn, when 15 months old, at 11. 5 s. *per* head. —They are partly Angleſey, and partly Shropſhire, and partly a croſs between the two. They are a good looking ſheep, but from their various mixtures, not very ſortable. The wool ſells at 15 d. *per* lib.

In our way from Middlewich to Cheſter, we ſaw a ſmall black and brown faced ſheep on Dalamere foreſt, which weighs about 7 or 8 lib. *per* quarter. It is a ſhort fine wooled ſheep, the fleece weighing, at an average, 1½ lib. and ſelling at 1 s. 6 d. *per* lib.

NORTH WALES.

From Cheſter, we went to Holywell and Downing in Flintſhire, called on Mr Pennant, the noted Touriſt, expecting ſome information regarding the ſheep of the country, as well as ſome uſeful directions about our route from him; but Mr Pennant ſignified, that he had never made the breed of ſheep an object of his particular ſtudy, or attention; and that the hint pointed out by the Society, appeared to him to be the beſt he could ſuggeſt; at ſame time, he very obligingly offered to prepare, and give us ſome letters to his acquaintance, if we would return by Downing next morning. Finding this, however, might lead us out of our way, we thanked Mr Pennant for his polite offer; and paſſing through Flintſhire and Denbighſhire, a corner of Cheſhire, again into Denbighſhire, and thence falling into Shropſhire, we arrived

at

at Shrewſbury.—When in North Wales, we ſaw a ſmall breed of ſheep, ill ſhaped, and the wool not fine, which, we were informed, were native. They weigh from 8 to 12 lib. *per* quarter—clip in general about 2 lib. the fleece, which formerly uſed to ſell at 7 d. but this year at 8 d. 9 d. and even 10 d. *per* lib. *.

Wales,

* The following account of the ſheep in Wales, was tranſmitted ſome time ago, by a native of that part of the kingdom, to the Britiſh Wool Society :—"The Welch ſheep, are of the ſame ſort and ſize time immemorial; nor are they likely to undergo any changes, as the apprehenſions created by the introduction of Engliſh ſheep into Angleſea and Caernarvonſhire, and, in conſequence, the ſcab, and other diſorders, to which the Engliſh ſheep are rather ſubject, has totally put a ſtop to any anxiety about improvement *.

"The Welch, are a ſhort uninviting animal to look at, very ſmall boned, and weigh, upon an average, when full fed, 10 lib. *per* quarter, or 40 lib. the carcaſe. The wool is of a cloſe texture, not long, nor in great abundance, but very fine and oily; nor has any one ſheep that I ever ſaw or heard of, a fleece of that hairy appearance, ſo prevalent in Scotland. It is a rule, not generally, but, at the ſame time, very frequently practiſed in this vicinity, about Michaelmas, to ſhear the ſheep from the neck to the loins and hind quarters; and the ſhepherds generally declare, the next ſummer fleece is thicker and finer, ſince this cuſtom has been adopted. A ram is often changed at no premium or expence, and the country chiefly, nay, always, applied to for a freſh ram, is the pariſh of Tally Uyn, at the foot of the mountain Kader-Idris, where the beſt and moſt admired ſheep in North Wales are found. The weight of the beſt fleece is 2 lib. averdupois. They are never houſed nor folded, but the lambs are brought down, and wintered in the vales the firſt year, but are ever afterwards courſed up to the mountains by curs, if they make their appearance in the vallies."

It is to be hoped, that the croſs with Cheviot rams, or the pure Cheviot breed itſelf, will be tried in Wales, that breed being equally hardy as the Welch, and much more profitable. In regard to mutton, any breed of ſheep, kept on hills, to 5 or 6 years of age, will always produce good mutton.

* *All ſheep, coming from a rich to a poor country, are ſubject to the ſcab and other diſorders, in conſequence of that ſcarcity of food, to which they have not been accuſtomed.*

Wales, though a mountainous country, has many fertile vales, which abound with weavers, who work up the greateſt part of the wool produced there, into what are called *Welch Flannels* *.

This naturally ſuggeſts an idea, moſt devoutly to be wiſhed for, in behalf of Scotland in general, and particularly in regard to the Highlands, namely, the introduction of the woollen manufacture into that part of the kingdom, as it is carried on in Wales. That is ſurely the beſt method to render a ſheep country populous, as well as valuable; to put a ſtop to emigration, by giving employment and bread to numbers, and to ſave the enormous expence of carriage, &c. incurred by ſending away the wool of one diſtrict, to another at a great diſtance, to be ſpun and manufactured, and buying it back again, when made into cloth;—a practice, which, at preſent, is too generally the caſe in Scotland.

SHROPSHIRE.

* A Welch gentleman, who has ſeldom a leſs ſtock than 400 or 500 ſheep himſelf, and frequently manufactures wool for the uſe of his own family, and for flannel, very obligingly communicated the following information, upon the ſubject of the Welch woollen manufactures, to a member of the Society:—"The webs are made principally in Merionethſhire, and the fineſt are manufactured from the body wool of the ſheep. The neck wool, which is generally the fineſt, is kept for flannels. The wool from the breech, legs, and thighs of the ſheep, together with other coarſe wool, that may be picked out of the whole fleece, is applied in making coarſe blanketting, for family uſe. In Merionethſhire, there are a hardy kind of white faced ſheep, that live upon the hills in ſummer, and upon the farms and hills in winter, and ſhift for themſelves all the year, without putting the farmer to a farthing expence to provide them provender. The wedder ſheep are kept to four, five, and ſix years old, and when fatted, will, upon an average, weigh about 10 lib. *per* quarter. The ſheep in the upper end of Merionethſhire, are alſo nearly the ſame ſort of ſheep, and white faced, but better woolled. The wool of theſe ſheep is picked into three ſorts; from the body and neck wool the fineſt flannels are made, ſome of which fetch in our markets from 3 s. to 3 s. 9 d. *per* yard: the reſt of the wool is converted into coarſe flannels".

SHROPSHIRE.

Auguſt 11. 1792.—This being Shrewſbury fair, we took the opportunity of viſiting the market, with Mr Evan Davies, and ſaw there ſeveral different kinds of ſheep.

1. What are called *the native Shropſhire*, which is a horned black faced ſheep, the wedder weighing from 14 to 16, and the ewe from 10 to 12 lib. *per* quarter, when fat.—Clip—the wedder fleece, about $2\frac{1}{4}$, and the ewe from $1\frac{1}{2}$ to $1\frac{3}{4}$ lib.

2. The laſt mentioned breed, *croſſed with Dorſetſhire white faced rams*, the wedder weighing from 18 to 20, and the ewe about 17 lib. *per* quarter; and clipping, the former, about 4 lib. and the latter 3 lib. *per* fleece.—The wool ſells at 1 s. 1 d. *per* lib. By this croſs, the carcaſe is improved, and the wool increaſed in length and quantity, but the quality is deteriorated. Upon the whole, however, we were informed, that the produce of the croſs pays the farmer better.

3. A kind called *the long-mynd, or mound ſheep*, ſmall horned, and black faced, the wedder weighing about 12, and the ewe from 9 to 10 lib. *per* quarter. The wool ſells at 1 s. 8 d. *per* lib.

4. *The long mountain ſheep*, weighing much the ſame as the laſt, but the wool rather finer, and ſelling from 1 s. 8 d. to 1 s. 10 d. *per* lib. Likewiſe horned and black faced.

5. *The Clunn Foreſt ſheep*, a large white faced *pollard*, (i. *e.* without horns,) the wedder weighing about 14, and the ewe, 11 lib. *per* quarter; the former clipping about 3, and the latter about $2\frac{1}{2}$ lib. *per* fleece.

We called upon Mr Drinkwater, woolſtapler, and examined his different kinds of wool, and took ſamples of the following:

Long

	No.	
Long Mountain, -	4	Of the ſamples given the Society.
Long Mound or Mynd, -	5	
Shawberry, - -	6	
Morſe, - -	7	
Ditto Lamb Wool, -	8	
Herefordſhire, - -	9	

Mr Drinkwater informed us, that wool had riſen in price, 20 *per cent.* this year.

Mr Telford of Shrewſbury, to whom we had a letter, ſhewed us every attention, and accompanied us to Mr Probert's at Capthorn, who was from home, and afterwards to Mr Biſhton's at Kelſal, thence to Bridgenorth, &c.

We found Mr Biſhton extremely obliging and intelligent. From his information, the following account of the Shropſhire breeds is drawn up.

Deſcription of the Shropſhire breeds.

Shropſhire contains a variety of mixed breeds, and Mr Biſhton does not think, that any of them can now be properly called a native, pure, or diſtinct ſpecies. They are not wild—are hardy, and leſs ſubject to diſeaſe, than many of the purer breeds of ſheep—they weigh from 10 to 16 lib. *per* quarter.—The mutton very good.—Clip about 3 lib. of wool *per* fleece, which ſells about 1 s. 2 d. *per* lib.—The wool is white; a medium between the long and ſhort wools. It is ſpun and made into cloth in Yorkſhire.—The wedders go off at two years old, except in the commons, where they are kept to four or five, at which period, their teeth begin to fail—the average weight of tallow is about 8 lib. though ſome have produced 14.—Have one lamb in March, and ſometimes ſooner—do not wiſh them to have more—well covered with wool when lambed.—Have no particular mode of

management—are never houſed—their food, the worſt of the graſs paſtures, with the fogs and ſtubbles—towards the ſpring, the ewes and lambs get turnips.—No particular diſorder prevails here.— In wet or marſhy lands, are ſubject to the rot, for which have as yet found out no cure.—New marled land has likewiſe been found apt to occaſion the rot.—In all the *paſtures*, by which are meant the incloſures, in contra-diſtinction to the commons, the ſheep are ſubject to what is called the *foot-rot*, a diſeaſe conſidered as infectious.

The foot-rot, being a very common diſorder among ſheep, all over the kingdom, we are happy in communicating the following very efficacious remedy for it, to the Society.

Receipt for the cure of the foot-rot, furniſhed by Mr Biſhton of Kelſal, near Shiffnal, Shropſhire.

1 Engliſh pint of ſpirits of turpentine—1 ditto of vinegar or verjuice—1 oz. of verdigreaſe—1 ditto of vitriol or blue-ſtone—1 ditto of ſugar of lead—1 ditto of ſaltpetre—1 ditto of ſpirits of nitre or ſalt—1 ditto of aquafortis—½ ditto of double diſtilled ſpirits of nitre.—Mix all the above articles together—pound and diſſolve them well, then put the whole in a bottle for uſe.

The claw, as far as corrupted, muſt be pared off, without any dread of going too near, then dip a little wool into the above preparation, and bathe the infected part with it.—One dreſſing cures.

For curing the ſcab in ſheep, the following receipt was furniſhed by Mr Biſhton.—Take 3 lib. of tobacco—7 ditto of ſalt—2 oz. ſpirits of ſalt—1 oz. of verdigreaſe—1 ditto vitriol.—The ſalt, and ſpirits of ſalt, to be put in, after the reſt are boiled all together for a quarter of an hour, in 3 gallons of aſh lee; then cover it up, to keep the ſteam down, till it is cool,

cool, ſtrain it, and bottle it for uſe.—It will keep many years.

No attention has hitherto been paid here to the improvement of the fleece, *feeding*, and not *breeding*, being here the object.—Buy in their ſtock from the breeding commons.

An obſervation here preſents itſelf, that where ſheep are fed for the butcher, and not bred, little or no attention to the improvement of the fleece can be expected. It is in breeding counties, therefore, that attention to the improvement of the wool ought chiefly to be inculcated. At the ſame time, any prejudice that may be entertained, in *feeding* counties, in favour of coarſe woolled ſheep, ought, as much as poſſible, to be eradicated.

Another obſervation occurred, in the courſe of our converſation with Mr Biſhton. It is well known, that horned ſheep are much wilder in their nature, and leſs inclined to fatten, than the pollard, and that much nouriſhment is taken from the fleece or carcaſe, to keep up an appendage to the head, perfectly uſeleſs to the ſheep, when they are domeſticated. But Mr Biſhton mentioned another objection to horned ſheep in general, and particularly in a country abounding with hedges and hedge-rows—they are more liable to be injured by flies, being apt to wound one another about the head, and wherever the ſkin is broke, there the flies are ſure to fix.

Mr Biſhton conſiders the following, to be diſtinct or ſeparate breeds, and mentioned a few of the general leading features of each ſort.

1. The Lincolnſhire and Leiceſterſhire breeds, which are called *pollards*, (a term applied to all ſheep without horns,) are long woolled, weighing about 12 lib. the fleece, which ſells at 10 d. *per* lib.—the wedder weighs about 30, and the ewe 26 lib. *per* quarter.—Derbyſhire, Warwickſhire, and a part

part of Oxfordſhire, have a ſmaller ſheep of the ſame kind.—The ſheep of Glouceſterſhire, are of the Leiceſterſhire kind, but the wool is rather finer and longer. It is conſidered, indeed, to be the beſt combing wool in England. The Worceſterſhire, are conſidered to be a ſpecies of, and mixed with the Glouceſterſhire.

2. The Herefordſhire is another diſtinct breed—*pollard*—ſmall boned—remarkably well ſhaped—weighing, the wedder, about 15 lib. *per* quarter, the ewe leſs. Clip about 1½ lib. *per* fleece, which ſells at about 3 s. *per* lib.—Drop the lambs in cots or ſhades. The ewes would lamb twice a-year, but they do not promote this, wiſhing them only to lamb once.

3. The Dorſetſhire, another diſtinct breed—*ſhort faced*—weigh about 20 lib. *per* quarter, and about 4 lib. *per* fleece, which uſed to ſell formerly at 1 s. but now at 1 s. 2 d. and 1 s. 3 d. *per* lib. Conſidered rather a delicate ſheep.

4. The Wiltſhire, are another diſtinct breed—*long faced*—weighing about 28 lib. *per* quarter, and about 3 lib. *per* fleece, which ſells at 1 s. 6 d. *per* lib.

Mr Biſhton looks upon the beſt croſs, for a moderate ſized *paſture ſheep*, to be, the Roſs ewes of Herefordſhire, with the ſmall horned Dorſetſhire ram.

There are in Shropſhire, a kind of ſheep called *the Shawberry ſheep*, which grow very fine wool, but ſo ſmall ſized, as to be denominated Tadpoles.

From Kelſal, we directed our courſe towards Bridgenorth, to inſpect the ſheep of Morſe common, near that town.—We ſaw the ſheep paſturing on the common, a ſhort, bare, green paſture, with a good deal of furze interſperſed. They are noways remarkable for good ſhape, or weight of carcaſe, but produce wool of a ſuperior quality. In conſequence of a recommendation from Mr Biſhton, we called on Meſſrs. Sings,

Sings, farmers at Bridgenorth, who gave us the following information.

The common is ſuppoſed to contain, about 6000 Engliſh acres, and may keep about 10,000 ſheep during the ſummer months, conſiſting partly of ewes, and partly of wedders, but more of the former.—They are conſidered a native breed—are a black faced, a brown, or a ſpotted faced, horned ſheep, little ſubject either to rot or ſcab—weighing, the wedder, from 11 to 14 lib. and the ewe from 9 to 12 lib. *per* quarter, after being fed with clover and turnips—and clipping, near 2 lib. the fleece, which ſells at 2 s. *per* lib. excluſive of the *breeching*, which may be about a ſeventh or eighth part of the whole, and ſells at 1 s. *per* lib.

The Meſſrs. Sings, clipped, this ſeaſon, 411 of the Morſe common ſheep, which, excluſive of the *breeching*, produced 45 ſtone, (14 lib. to the ſtone,) or, 630 lib. weight; and ſold at the above rate of 2 s. *per* lib.—*inde*, - L. 63 0 0

And the *breeching* weighed between 50 and 60 lib. (ſay 55 lib.) at 1 s.—hence add, 2 15 0

Total, - - L. 65 15 0

Which makes the produce ſomething more than 3 s. 2 d. the fleece. They alſo ſhear the lambs, the wool of which ſells at 2 s. *per* lib. including *breeching*.—Breed their own ſheep, which are ſometimes croſſed with larger tups, to improve the carcaſe, but the wool is the great object here. It is advanced this year 3 s. *per* ſtone.—Uſed formerly to go to Glouceſterſhire, but is now ſent to Yorkſhire, where it is ſuppoſed to be mixed with Spaniſh wool, for making fine cloths.

The lambing ſeaſon is, from the middle of February to May. Lamb only once a year, and ſeldom have more than one lamb. The ewes paſture on the commons, from the middle

middle of June, when the lambs are weaned, to the month of October, when they and the young ſheep are brought into the paſtures, for the winter; the wedders only remaining on the common, where they are fed with hay, in ſevere weather, as are ſometimes the ſheep in the paſtures. Such of the *dry*, or *yeld* ſheep, as have been brought into the paſtures, return to the common, about March. From the ſhortneſs of the paſture, and brouſing upon the furze in the common, they begin to loſe their teeth, at four or five years old, when they are diſpoſed of. The ewes, lean in the month of October, and the wedders, after being fattened with turnips, the beſt of which are applied for that purpoſe; and the remains, called the *cullings*, are given to the ſtore or holding ſtock.

In our way from Bridgenorth to Ludlow, we ſaw ſheep, whoſe fleece and paſture appeared pretty ſimilar to the Morfe, though perhaps not quite ſo fine in the wool.—From Ludlow, we came to Leominſter, and thence to Hereford all night.

HEREFORDSHIRE.

From Hereford, we went to call on Mr Vorſe, at Warham, and his tenant, Mr Pantal, to whom we were recommended by Mr Campbell of Preſton, and thence came to Roſs all night.—Saw and examined Meſſrs Vorſe and Pantal's flocks, and purchaſed from Mr Vorſe, two tups and eight young ewes, which he was ſo good as to allow us to pick from his whole flock; though we underſtand that, in Herefordſhire, they are very averſe to the parting with their beſt ſheep.—From them, we received the following account of the ſheep of that country.

Deſcription

Deſcription of the Hereford or Ryeland Breed.

They are native, domeſticated, and hardy.—Uncroſſed, nd go by the name of the Ryeland breed.—Average weight, 4 lib. *per* quarter; fore and hind quarters nearly equal.—he mutton excellent.—Average weight of wool, 2 lib. *per* ece; and average price, 32 s. *per* ſtone, (12½ lib.)—Meſſrs orſe and Pantal ſold their wool this year, excluſive of the *eching*, at 1 l. 13 s. *per* ſtone, clear of all deductions.—he wool, from the ſheep's going upon the fallow grounds, the colour of the ſoil: Short and fine in the ſtaple, and ſt calculated for making fine cloth.—At perfection at five rs old.—Produce, 8 lib. of tallow, excluſive of the kidney —Generally one lamb, in the month of January, Febru-, and March;—ſome have two;—well covered with wool en lambed.—Mr Vorſe's practice is, to put out his beſt , the firſt week of Auguſt, for a fortnight or three weeks; n to take it away, and put out another; and ſo on ſuc-ſively, till all the ewes are tupped. Other people put the s to the ewes altogether. The former practice may an-r in a ſmall flock, and ſeems to be admirably calculated bringing any breed to perfection, as ſo much depends on excellence of the ram. Even in larger flocks, the ſame n might be adopted, by putting out, inſtead of one, per-s three, or ſix, or even more, of the very beſt tups; and others, in ſucceſſion, according to their quality.—The s are ſold at four or five years old, from 18 s. to 22 s. wedders from 18 s. to 20 s. *per* head, lean.—Mr Vorſe four remarkable fat wedders, in Smithfield market, at . a head.—The lambs are dropt, ſome in the cot, and e at the door; but the former is reckoned the ſafeſt me-d;—are kept in the cot till ſtrong, and are afterwards turned

turned out, with the ewes, through the day;—are uſually weaned about the laſt week of June; after which, they are not again cotted, till a year old.—Shear the lambs, about the 1ſt of Auguſt, when they clip about 1 lib. *per* fleece, price 2 s. 4 d.—Subject to no diſeaſe but the ſcab, which is readily cured, by ſcraping the ſore, and putting on a very little turpentine.—No experiments hitherto tried, for farther improving the fleece.—It is found, that good keeping increaſes the quantity, but injures the quality of the wool.—Only clipped once in the laſt week of May, or firſt week of June.

GLOCESTERSHIRE.

We came from Roſs to Newent, in Gloceſterſhire, where we called on the Reverend Mr Foley, who, though engaged with a numerous company at his own houſe, was polite enough to give us an interview. He favoured us with the following information, reſpecting the breed of ſheep in the neighbourhood.

Deſcription of the Gloceſterſhire Ryelanders.

They are native in this part of Gloceſterſhire, and conſidered to be the true Ryeland breed.—Completely domeſticated, and very hardy.—Pure, and not croſſed.—*Pellards* much the ſame with the Roſs ſheep, but have no wool on the fore head.—Have remained the ſame from time immemorial.—No gentlemen, in this quarter of the country, live on their eſtates; and the farmers are not diſpoſed to run the riſk of trying experiments, by croſſing.—When fat, weigh, at an average, from 14 to 16 lib. *per* quarter;—little or no difference in the weight of the hind or fore quarters;—ribs generally the ſame.—The mutton moſt excellent; and, as ſo recommend

recommended, by medical gentlemen, to their patients, in preference to chickens: The older conſidered the better.—Clip 1½ lib. *per* fleece, which ſells at from 21 s. to 24 s. *per* ſtone, (12½ lib.); whereas, the wool of the brothers and ſiſters of the ſame ſheep, after being in Roſs only five or ſix months, gives 38 s. *per* ſtone. If we may venture a conjecture upon this diſparity of price, and ſo ſudden a tranſition, we would be more ready to impute it, to a want of proper diſcrimination, or perhaps to more ſpirit in the wool buyer, or to its being mixed with the finer wool of that quarter, than to any real change in the quality, that could poſſibly be made by paſture or climate, in ſo ſhort a period.—The colour of the wool is, in general, white;—formerly ſold and manufactured in the country; latterly into Yorkſhire; but the dealers from Yorkſhire did not attend Roſs fair this year.—At perfection at four years old; but ſeldom kept to that age, except in gentlemen's parks; as, in a feeding country like this, they are generally killed younger.—Have only one lamb, in general, though ſometimes two;—not well covered with wool when lambed.—No particular mode of management;—no cot;—no fold.—Their food, graſs, turnips, hay, corn, and ſometimes hay along with turnips.—Subject to the rot only in ſwampy or wet lands;—have not yet either diſcovered the cauſe, or cure. The plant *droſera*, or Roſa ſolis, is, by ſome, ſuppoſed to occaſion the rot *.—The Leiceſterſhire farmers, it is ſaid, when ſelling their ſheep to the butcher, to ſecure againſt their being afterwards diſpoſed of for breeding, frequently make it a condition of the bargain, that they are to rot them, before they are taken away, which, they ſay, they can do in the courſe of three or four days, by putting them on certain marſhy lands; and the butcher, it ſeems, does not heſitate to comply with this

 condition.

* See an account of this plant in vol. 6. part 1. of the new Encyclopaedia, page 128.

condition.—No method hitherto adopted for improving the wool of this breed; the carcaſe here, as in moſt feeding counties, being the chief object.—The wool clipt but once a year. Mr Foley, in the courſe of our converſation, ſeemed to ſtate it as his opinion, that *hard keep*, or a ſcarcity of food and *cotting*, might tend to improve the quality of the wool.

WILTSHIRE.

As we proceeded through Glouceſterſhire, a ſmall part of Somerſetſhire, and Wiltſhire, we met with a large, white faced ſheep, chiefly of what is called *the Wiltſhire breed*, with horns falling back behind the ears; long faced and legged; ſtrong boned, and of tolerable ſhape. Wool worth about 1 s. 6 d. *per* lib. We ſaw flocks, principally compoſed of that ſort of ſheep, on the Wiltſhire downs; and examined three of the ſhepherds, from whom very little could be learned. They told us, that the ſheep were native, had only one lamb, and were clipt once a year;—that the lambs, after being weaned, were kept ſeparate from the dams for a month;—and that hay was given to the ſheep, for about half a year from Michaelmas, three times a day during ſnow, and once in bleak weather. One of the ſhepherds, ſpeaking of the Dorſetſhire ſheep, mentioned, that they were neither ſo high in their legs, nor ſo hardy, as the Wiltſhire; and that they went in an incloſed country.

When we came forward to Marlborough, we were informed, that the Downs are not common, like moſt unincloſed grounds we had ſeen, but divided into diſtinct farms:—That the ſheep are fed with turnips in winter; and that ſome of the lambs alſo get turnips, or clover:—That the carcaſe weighs about 20 lib. *per* quarter;—and that the wool (which takes nine fleeces to the *tod*, of 29 lib.) ſells for about 1 s. 6 d.

6 d. *per* lib. We were here told, that one farmer in this county, whoſe name our informant had forgot, ſold his tups, at one year old, for 30 guineas a head.

Mr Waldren, manufacturer at Trowbridge, where we ſpent a night, came and paſſed the evening with us. Mr Coles, another gentleman to whom we had been recommended, was not at home. Mr Waldren told us, that he was not competent to give the neceſſary information, either as to the different kinds of ſheep, the quality of their wool, or the manner of ſorting it, all theſe objects of inquiry being more connected with the profeſſion of the wool-ſtapler, who buys the wool from the grower; and from whom he, and the other manufacturers, get it ready ſorted and prepared to their hands. Mr Waldren chiefly manufactures Spaniſh wool; but we took occaſion to ſhow him ſamples of the Cheviot wool, both *ſalved* and *unſalved*; and, upon mentioning the price it gave at preſent, he ſeemed to think it far below its value, and expreſſed a deſire to have a pack of each kind ſent him, which he propoſes to manufacture, into ſuch cloth as it ſeemed beſt ſuited for, and to keep an exact account of the expence, with a view to ſee, if it could not be brought to a better market, of which he ſeemed to entertain little doubt *.

Mr

* A good deal of the Cheviot wool is fine; but it has not yet been brought to all that perfection, of which it is capable. The proportion of coarſe wool in the fleece, is by far too great, and diminiſhes its value conſiderably. In the Hereford fleeces, only $\frac{1}{15}$th part goes *to breech*, or is much objected to, on account of its coarſeneſs; whereas, in the Cheviot wool, a much ſmaller proportion, or, as ſome might perhaps aſſert, not one half can be called fine wool. Hence, whilſt the former ſells for above 2 s. the latter does not bring even 1 s. *per* pound. There can be no doubt, however, that, by attention and good management, the Cheviot wool might be made as fine, if not even finer, than what the Hereford is at preſent; and it is certainly now in the road of making a very rapid progreſs.

Mr Waldren, in the courſe of converſation, expreſſed an opinion, which we think it incumbent upon us to mention, (more eſpecially as we found the ſame idea entertained by other reſpectable manufacturers, with whom we had afterwards occaſion to converſe), that, from the extended and increaſing demand for the Britiſh woollen manufactures, and particularly thoſe of the coarſer kind, there was reaſon to apprehend, that, in a ſhort time, there would not be a ſufficiency of wool produced in the iſland, to ſupply the manufacturer; and, that he would be conſtrained, to ſeek other foreign markets, beſides Spain, for a ſupply of the raw material: From which conſideration, it appeared to him, to be more a national object, to promote the increaſe of the quantity, than to be enhancing the quality, unleſs the latter object could be attained without trenching upon the former. But, to any idea of that ſort, the anſwer is obvious. In the firſt place, if the long woolled breed of ſheep is introduced into every part of the country, fit to maintain them, an enormous addition will be made to the quantity of wool in the kingdom; and, in the ſecond place, if the almoſt unbounded waſtes in the Highlands of Scotland, now devoted to the feeding of a very ſmall number (at leaſt in proportion to their extent) of black cattle, were covered with ſheep, ſuch an addition would be made, to the quantity of wool produced in the iſland, as might amply ſupply the increaſing demands of all our manufacturers.

We found Trowbridge had been, for ſome time, in a commotion, not altogether ſubſided, ariſing from the weavers having taken a diſlike to the late improvements in machinery, (particularly to the introduction of the ſpring ſhuttle), from an idea than their labour, would thereby be rendered in leſs requeſt; but Mr Waldren obſerved, that the apprehenſion was, in a great meaſure, intirely groundleſs; for, though

more

more work, would, no doubt, be done at leſs expence, a de-ſirable object at all times, in any branch of manufacture, but more eſpecially when the demand was increaſing; yet, that more hands would neceſſarily be required in the other preparatory departments.—The military, who had been called in to ſuppreſs the inſurrection of the weavers, were ſtill in the town.

In Wiltſhire, they float their meadow lands, for a few days in the beginning of ſpring, (either during February or March, as the ſeaſon admits of it), at an expence of about 5 s. *per* acre. Theſe meadows let for about 3 l. *per* Engliſh acre. Ewes and lambs are fed upon them, during the month of April, for which they pay at the rate of about 30 s. *per* acre. They are floated again about the middle of May, and after-wards produce from 1½ to 2 tons *per* acre, of hay. The fog is afterwards eat by cows and horſes till Martinmas.—The ſheep are ſold lean, at Weyhill and other fairs in the neigh-bourhood, for the feeding counties. They conſider their land too ſtrong for the drill huſbandry, and ſow their tur-nips in broad caſt, which they give to their holding ſtock, between Michaelmas and Martinmas. This is followed by a crop of wheat.—The latter ſown turnips are given to the ewes and lambs in the ſpring, followed by a crop of barley, ſown off with clover and rye-graſs, which is next year mown once, and ſometimes twice; and the following ſeaſon paſ-tured with ſheep, and again ſown with wheat; and after-wards with barley; two white crops, and one green one, be-ing here the general ſyſtem of rotation. There is every where, in this country, abundance of limeſtone, which is generally burnt with furze and ferns, owing to the great dif-ficulty and expence in procuring coal, from about 36 miles diſtance.

BERK-

BERKSHIRE.

We proceeded to Windſor, through the Foreſt, and ſaw a conſiderable number of various ſorts of ſheep, ſome horned, and ſome *pollards*, though moſtly the former; ſome white, ſome black, ſome grey, and ſome ſpotted faced;—in general, they were leſs than thoſe we ſaw in Wiltſhire; and, in the adjoining heaths, we were told of a ſtill ſmaller ſort, black on the face and legs. We were aſtoniſhed to find ſo miſerable a breed of ſheep ſo near the metropolis, and in the neighbourhood of a Sovereign, diſtinguiſhed for attention to rural economy, and whoſe zeal for the improvement of his flock, is, we underſtand, ſo deſervedly celebrated.

The commons here, are of conſiderable extent. They are poſſeſſed by the landholders and tenants, without being ſtented in number or walk, and, in ſuch commons, we were told, it is a rule, not to admit of individual ſhepherds.

From Windſor, we came to London, through Hounſlow, &c. and ſaw a conſiderable number of ſheep on the heath, much of the ſame mixed kind above mentioned, but, in general, better than thoſe of Windſor Foreſt.

MIDDLESEX.

While in London, we waited on, and converſed with, Dr Garthſhore, a reſpectable member of the Royal Society, who introduced us to Mr John Maitland, partner in the great commercial houſe of Sir Samuel Fludyer and Company, (perhaps the firſt in the woollen line in London,) who behaved with great urbanity; carried us through his extenſive warehouſes; ſhewed us the different kinds of woollen goods; among others, ſome cloth made from the Cheviot wool, the

alue of which, it not being dreſſed, could not yet be aſcer-ained. He alſo ſhowed us, a variety of wool, of the follow-g kinds, from which we ſelected ſamples.

	No.	
Beſt Hereford, ſcoured, marked, -	10	Of the ſamples given the Society.
Beſt Suſſex, - - -	11	
Beſt Spaniſh, - - -	12	
Hog wool from the Spaniſh breed, belonging to Sir Joſeph Banks, -	13	
Paca and Lama wool, from South America, in its natural ſtate, -	14	
Ditto, carded, - -	15	
Four different kinds of Carmenia wool in Aſia, - - -	16	
Thibet wool, - -	17	

We repeatedly viſited Smithfield market; and ſaw a varie-y of kinds of ſheep from different counties, particularly the ollowing:

1. Dorſetſhire, pretty much like the Wiltſhire, except-ng, that they are not ſo long in the legs, nor ſo heavy in he carcaſe—head a little ſhorter—noſe not ſo high—the orns ſtand more out from the face—perhaps not ſo hand-ome.—2. Glouceſterſhire—*pollard*—wool and ſhape appear-d indifferent.—3. Norfolk, the wool good, but the ſhape ndifferent.—4. Welch, very indifferent, both in regard to hape and fleece.—5. Suſſex, tolerably well ſhaped—dark fa-ed—in good condition, with a fine fleece.—We alſo ſaw the Leiceſterſhire and Lincolnſhire ſheep, of which we ſhall peak more fully when we come to theſe counties.

SURRY.

SURRY.

We took a ride into Surry, where, meeting with a ſhepherd originally from Wiltſhire, he informed us, that the ſheep of Marlborough downs, clipped about 3½ lib. *per* fleece, and that the wedders, when well kept and fat, would weigh about 28 lib. and the ewes, about 24 lib. *per* quarter.

We ſaw 1200 ewes of the Southdown breed, belonging to Mr Wood of Woodcote—they are *pollards*, dark faced, of a bad ſhape, but with good wool.—They were attended by two ſhepherds; one of whom, a young man from the Southdowns, gave us the following information: That they clip about 2½ lib. *per* fleece, after ſome of the coarſer parts had been taken off in ſpring, (which is much the ſame with what they clip in Suſſex)—That the wedders of four or five years old, weigh about 24 lib. *per* quarter—That in the Southdowns, the rams are put to the ewes, about a fortnight after Michaelmas, the beſt rams to the beſt ewes *—That the lambs are weaned about Midſummer, and put on clover, &c. till Michaelmas, when they are ſent to the Lowlands to winter, at ſo much *per* head, after which they join the flock—That the ewes have lambs at two years old—They ſhear a little wool from the lambs—Hay, in winter, in bleak, as well as in ſnowy weather, and give the ewes turnips in the ſpring. Few wedders are kept.—The ewes, when *full-mouthed*, ſell at 22 s. *per* head.

* This is indiſpenſibly neceſſary, in order to bring any breed of ſheep to perfection; and every ſheep farmer in the iſland ought to have an incloſure for that purpoſe.

HERTFORD, BEDFORD, BUCKINGHAM, AND NORTHAMPTON SHIRES.

After ſeeing all, that our time would permit, in London, and its environs, we proceeded on our return home, bending our courſe towards Leiceſterſhire, through the counties of Hertford, Bedford, Buckingham, and Northampton, in which we ſaw different kinds of ſheep; in Northamptonſhire chiefly the Leiceſterſhire, and in the other counties, moſtly the Wiltſhire breed; but, as we were informed, that they were principally feeding, and not breeding counties, we did not think it neceſſary to enter here into any minute inquiry.

LEICESTERSHIRE.

From Loughborough, we ſent our letter to the celebrated Mr Bakewell, who was polite enough, (the afternoon proving rainy,) to come to town, and ſpend the evening with us; and next morning we accompanied him to Diſhley, where he firſt ſhowed us his ſtock of black cattle, bulls, cows, and oxen, all remarkably well ſhaped, and in good condition. It has been Mr Bakewell's ſtudy, to promote and improve a breed of cattle, which lays moſt fat on the upper, or roaſting parts, theſe ſelling at a much higher price, than the lower, or boiling pieces; and, from the cattle ſhewn us, he ſeems to have wonderfully ſucceeded in attaining that object. The cattle were in the houſe, and not ſhewn us together, but brought out, one after another, which, it ſeems, is a rule of the Society with which he is connected.

Mr Bakewell has been in the practice, theſe ſeveral years, of watering his meadow, and paſture lands, which he conſiders a great improvement, as ſuperſeding the neceſſity of

manure, and producing more food by 20 s. *per* acre; though the original expence of making the canals and interſections, did not exceed that ſum, and the annual expence attending keeping the drains in proper order, and all the watering operations, is not more than 5 s. *per* acre. He has no regular, or fixed period for watering, as in Wiltſhire, but keeps watering all the year round, cutting generally four times in the ſeaſon, and giving what is cut, green to his cattle, in the houſe. He has mowers conſtantly at work, and ſays, he keeps cutting till Chriſtmas. The time and manner of watering, Mr Bakewell ſays, is very diſcretionary, and depends much upon ſituation. When very hot, the water is allowed to continue about 48 hours, when moderate, about 4 days, and when cold, about two weeks. Watering is not yet become general. We formerly mentioned, that the Biſhop of Llandaff had begun it at Calgarth, with ſucceſs. Where the ſituation anſwers, it certainly ought to be adopted, eſpecially in countries at a diſtance from lime, and other foreign manure; and, perhaps, it is one of the greateſt means of improvement, that can poſſibly be introduced, into many parts of Scotland. Mr Bakewell thinks, it would alſo be of conſiderable benefit, even to arable land, where it could be accompliſhed.

At Diſhley, we ſaw ſpecimens of various breeds of ſheep, in particular the following:—1. The Dorſetſhire, a horned ſheep, with a good fleece, but not well ſhaped, and in very poor condition.—2. Iceland, with four horns, a ſpotted, long carcaſed animal, fleece and ſhape both bad.—3. Cape of Good Hope, bred in England, more like a goat than a ſheep, fleece very hairy, and conſiderably longer about the neck than in the other parts, and of a browniſh colour—*pollard*, ill ſhaped.—The only valuable part of the fleece ſeemed to be a little down, next the ſkin, but by no means

ſo

ſo fine as the Shetland.—4. Norfolk, a horned, and long legged ſheep, fleece and ſhape both bad.—5. Cheſhire, neither fleece nor ſhape very good.—6. Suſſex, fleece good, but ſhape bad.—7. Hereford, ſuperior fleece.—8. A croſs between the Hereford ewe, and a Spaniſh ram; the fleece inferior to the former, which to us was ſomething ſurpriſing.—9. A croſs with the Hereford ewe, and Leiceſter ram, ſuperior both in ſhape and fleece to the two laſt.—10. The ewes and wedders of the Bakewell breed, which are ſo well known, and have been ſo minutely deſcribed by Mr Marſhall, and other authors, as to render any particular deſcription from us unneceſſary.

We could not ſee his rams, on account of a rule of his Society, that they are only to be ſhewn from the 8th of June, to the 8th of July, and from the 8th of September, to the end of the ſeaſon.

Mr Bakewell informed us, that all the above ſheep, had gone together, on the ſame paſture, ſince they were lambs—that with a view to ſee which of them fed upon the leaſt food, he took them into the houſe, and tied them up for a fortnight, weighing them when they went in, and giving them as much food as they chuſed to eat, which was alſo weighed, and a regular account kept of the whole. The following was the reſult with regard to the four laſt above mentioned.

	Weight of Sheep. Lib.	*Weight of Meat.* Lib.
Hereford, - -	149	145
Half Hereford, and half Spaniſh, - -	163	179
Half Hereford, and half Leiceſter, - -	170	150
Leiceſter, or Diſhley breed, - -	174	95

Mr

Mr Bakewell, from a paper in his hand, mentioned the weight of the other ſheep, and what they eat; but, as they were all in a worſe condition, in proportion to their weight and eating, than thoſe mentioned above, he declined giving us leave to note down the particulars, telling us, that he had been much *bored* by the public on the ſubject, who alledged, that it was a mere trick on his part, calculated to decry other breeds, and to puff off his own. We know nothing how this matter may ſtand, between the public and Mr Bakewell; but one thing we could not help obſerving, that all the above kinds of ſheep, ſhown us, proved a conſiderable foil to Mr Bakewell's own breed, which were greatly ſuperior in ſhape, weight, and condition, to any of them, though according to our information, they had been maintained on leſs meat.

Mr Bakewell prefers a light boned, to a large boned ſheep, and mentioned an experiment he had lately tried, in order to ſettle his mind upon this ſubject. The large boned ſheep, weighing 200 lib. eat 143 lib. in a fortnight; while the light boned, which weighed 223 lib. eat only 108 lib. in the ſame period. The principle is probably a juſt one; at the ſame time, it can hardly be conſidered as concluſively decided, by the reſult of a ſingle experiment, for ſo ſhort a ſpace of time. Mr Bakewell, indeed, goes ſo far as to ſay, that he never ſaw a good ſheep with a large bone; and he applies the ſame obſervation alſo to black cattle and ſwine, ſignifying, that he queſtioned much, if the Weſt Highland Scotch, were not the beſt kind of black cattle. He added, that, in his opinion, many ſmall are to be preferred to a few large cattle or ſheep, if the ſame quantity of paſture, or food, will pay equally, by feeding the many, as the few.

The criterion of excellence, with Mr Bakewell, ſeems to be, *what will pay moſt, for the ſame quantity of food.*

There

There are three different breeds of ſheep in Leiceſterſhire; the old Leiceſter breed; the new Leiceſter or Diſhley breed; and the common or foreſt ſheep. The fleece of the Diſhley breed, weighs, at an average, 8 lib. and ſells, at preſent, at 10d. *per* lib. Mr Bakewell conſiders his own breed hardy enough for any part of the iſland, that could produce them ſufficient food, and even able to climb and live on mountainous grounds, which, if it were the caſe in ſummer, could hardly be poſſible during the ſnows of winter, whether the ſhortneſs of their limbs, or the weight of their fleece and carcaſe, is taken into conſideration *. In regard to climate, Mr Bakewell expreſſed an opinion, that, in general, it had not ſuch an effect as was ſuppoſed, in changing the nature of ſheep or wool; referring, in proof of that idea, to the above different kinds of ſheep ſhown us, as ſtill retaining their diſtinct and original qualities, both in regard to ſhape and fleece, notwithſtanding the change of climate and paſture. Keep the breeds pure, and Mr Bakewell is ſatisfied that no material change will be effected by either climate or paſture. This not being generally believed, or underſtood, deſerves to be farther inveſtigated and attended to. Mr Bakewell, however, acknowledged, that the ſame kind of ſheep would not produce ſuch fine wool, in *rich* as in *poor* paſture, which is certainly agreeable to paſt experience and obſervation.

Notwithſtanding that Mr Bakewell gets about 3000 l. a year for hiring out his rams, he expreſſed an unfavourable opinion

* The Diſhley breed is, perhaps, the beſt ever reared, for a rich or arable diſtrict; *but the leaſt tincture of that blood, is deſtruction to mountain ſheep*, as it makes them incapable of ſtanding the ſmalleſt ſcarcity of food. Give them meat enough, and they will live at the tops of the higheſt mountains, their fleece being a ſufficient protection againſt the inclemency of the weather; but they would ſoon ſink under the hardſhips, which a true mountain ſheep muſt undergo during the winter, to procure itſelf ſubſiſtence.

opinion of the practice of croſſing, affirming, that it would be much better to find out what was the beſt, or moſt ſuitable breed, for the different kinds of land, *e. g.* for land at 5 s. 10 s. 15 s. and 20 s. *per* acre; and ſuppoſe, in a progreſſive ſtate, other four kinds, making in all eight; and to extirpate the reſt, in place of keeping them on, and attempting their improvement by croſſing.

However expedient, as a general rule of the Society, it may be, to limit the periods for ſhowing their rams, to prevent, by ſuch an internal regulation, the farmer from being conſtantly confined at home, waiting on his cuſtomers; yet we cannot help thinking it highly abſurd, and even injurious to the intereſt of the Society, to be obſerving it with ſuch ſtrictneſs, as not to ſhow their rams to people coming from a diſtant country, or ſent by a reſpectable body, aſſociated for the purpoſe of general inquiry, and national improvement, without any immediate view of either buying or hiring.

As we looked upon the Diſhley breed to be the beſt, at leaſt the moſt ſuitable for incloſed and rich paſtures, of any we had hitherto ſeen, we obſerved, that it muſt ſurely be againſt the intereſt of the proprietors of ſo valuable a ſtock, to prevent the proper knowledge of its excellence from being generally diffuſed, which, we obſerved, the ſhowing of their rams to ſtrangers, under ſuch circumſtances, would tend to promote *.

In

* Mr Bakewell ſeemed to feel the force of this obſervation; and ſaid, that he would lay it before the Society, at their next meeting, and move for ſuch a liberal explanation, as to prevent the members from ever being again in the ſame diſagreeable ſituation, in which he felt himſelf, being under the neceſſity of refuſing our requeſt, to give us a ſight of his rams: At ſame time, Mr Bakewell was kind enough to preſs us much, to ſpend two or three days in that and the neighbouring county of Lincoln, and to return to Diſhley on the 8th of September, when we

In our way to Lincolnſhire, we paſſed through Nottingham-ire, where the new Leiceſter breed chiefly prevails, though e met with a few, of a very mixed breed, and indifferent ape.

LINCOLNSHIRE.

We intended to have waited on Sir Cecil Wray and Mr haplin, and to ſee their flocks; but being informed, at Lin-ln, that it was the race week, and that a meeting of the ntlemen of the county, for the purpoſe of addreſſing his ajeſty on his late proclamation, was fixed for that day; we quired after, and found they were both in town; and immedi-ly waited upon Mr Chaplin, who, after ſignifying his re-et, that he could not be at home for ſome days, (which evented his accompanying us to Tathwell, near Lowth, here he reſides), he very obligingly gave us the following formation, reſpecting the breed of ſheep, for which he is ſo lly celebrated.

Deſcription of the Lincolnſhire Breed.

The breed is native, domeſticated, and hardy.—Mr Chap-'s ſtock is, in general, pure, though a part is croſſed with Durham or Tees-water breed. The principal character-cs, in which they differ from other ſheep, are, a conſider-e weight of collar, (producing 1½ lib. of wool), greater , and heavier carcaſe.—The average weight of the carcaſe, of the different quarters, has not yet been aſcertained;—con-ered to be among the heavieſt in the iſland.—The mutton is

would have an opportunity of ſeeing his rams, and a con-rſe of farmers aſſembled for the purpoſe of hiring them. this our time unfortunately would not permit.

is good, when killed properly, and cool; but, when driven too faſt, its quality muſt neceſſarily fall off, unleſs the animal has time to recover.—The average weight of the fleece is 10 lib.—Price of the tod, (29 lib. each) 1 l. 6 s.—The hog wool is from 16 to 18 inches in length; the wedder from 10 to 12.—Colour, a beautiful white, and ſaid to take a better dye than any in the kingdom; which Mr Chaplin aſcribes to its being mellow, and free from hair: He ſpins all his own wool into yarn, for carpetting.—Keep their wedders *three ſhear*. Mr Chaplin killed a remarkable one of *two ſhear*, which had 2 ſtone, 11 lib. of tallow.—Generally one lamb, though ſome have two, and even three; but one is preferred.—Lamb from about 20th March to May.—Well covered when lambed.—No particular mode of management.—An attentive, good ſhepherd, conſidered better than any given mode.—Do'nt houſe.—Food, *paſture*; and, in winter, turnips and clover.—Not ſubject to any particular diſeaſe.—Conſider keeping them clean, of conſequence in preſerving health.—Have a waſh, called *fag watering*, compoſed of ſoap and mercury, for killing the *fags*, or, what are called *kades* in Scotland.—Mr Chaplin had 20 ſheep ſuddenly taken ill, having been over-fed with barley; nine died, before any thing was adminiſtered to them; but each of the remaining eleven having a cupful of Geneva given them, all recovered.—No method hitherto taken to improve the fleece.—Clip only once in June;—waſh ten days before.—Mr Chaplin has clipped 26 lib. of wool, from a *two ſhear* ſheep: He has clipped another, for five years ſucceſſively, which did not vary in its weight 1½ lib. in any one year, and produced about 15 lib. each year.

We likewiſe met with Sir Cecil Wray, who behaved with much politeneſs,—regretted his being obliged to go next day to Hull, by which he was prevented from carrying us to ſee

his flock at Summerhill,—wiſhed we could have gone to his houſe, and waited his return; but, on our ſignifying, that this was incompatible with the time we were under the neceſſity of being at home, Sir Cecil informed us in general, that he was in the practice of croſſing the Lincolnſhire ewe, with the Leiceſter or Bakewell ram, which was found to be a great improvement; and, as ſuch, very generally followed by the Lincolnſhire farmers.

Sir Cecil referred us, for farther information, to Mr Codd of Glentworth-heath, a neighbouring farmer, to whom we had alſo got a letter from a friend in London. We went to Mr Codd's in the morning, who carried us round his farm, and ſhowed us his ſheep paſturing in ſmall parcels, in different incloſures. Told us, that his original ſtock were bought in lambs, about 17 years ago, at Stagſhaw-bank fair, in Northumberland, (whence we ſuppoſe them to be of the Cheviot or Northumberland hill breed): That he had croſſed with Mr Bakewell's rams for three years; but, as Mr Bakewell kept riſing every year in his demand, he found it neceſſary to *ſhut up ſhop*, about ſeven years ago; ſince which time, by attending to picking the beſt, and ſorting the tups and ewes, he has made conſiderable improvement. He now ſhows a very well ſhaped and hardy ſheep, reſpecting which, and the native Lincolnſhire, he gave us the following information.

Deſcription of the Lincolnſhire breed.

The original native Lincolnſhire breed, he obſerved, are tame and domeſticated, but an ill ſhaped, croſs boned ſheep, tender, and hard to feed. They are now, however, moſtly croſſed with the Leiceſter rams, which has very much improved the carcaſe, though not the fleece, which is not here the farmer's object.—They weigh from 16 lib. to 34 lib. *per* quarter, average 24 lib. when about $1\frac{3}{4}$ or 2 years old, at which age they are generally ſold. The fore quarter weighs

from 2 lib. to 6 lib. *per* quarter, more than the hind. They ſometimes differ in the number of ribs, by one. Not certain as to the number, but thinks 13 or 14.—The native Lincolnſhire is not eſteemed fine mutton.—Mr Codd's breed is remarkably ſo, and, as ſuch, preferred by the butcher.—When croſſed with Leiceſter rams, the Lincolnſhire ſheep clip 2, 3, and 4 fleeces to the tod, (about 11 or 12 lib. *per* fleece.) Mr Codd's breed, clip about 8 lib. *per* fleece, which he ſold this year, before it was clipped, at 1 l. 4 s. 9 d. *per* tod; but wool has riſen ſince, 3 s. or 4 s. *per* tod.—Colour, white.—Length, the hog wool, from 5 to 14 inches; average length of ewe and hog 8 inches, which is conſidered a ſufficient length for any thing made of wool.—Mr Codd finds it ſuits his farm beſt, to ſell off his ſheep, about two years old, when they are ſufficiently fat, and produce about 16 lib. of tallow.—The Lincolnſhire ſheep have, in general, only one lamb, though, perhaps, about a third or a fourth have twins; and ſome, when well kept, have three.—Lamb only once a year, from 12th March to May.—Well covered when lambed.—No particular mode of management.—Have a regular bred ſhepherd.—Paſture in incloſures.—Never houſe;—give turnips to the *feeding*, and hay and turnips to the *holding* ſtock in winter; but the general food is paſture, graſs, and clover. Trefoil is conſidered the beſt ſuckling food.—The Lincolnſhire ſheep are, in general, very healthy.—The ſickneſs (here called the *riſp*) is ſuppoſed to be occaſioned by luxuriant paſture in the ſpring, or when put on turnips, in which caſe, it commonly takes place about the fifth or ſixth day.—As ſoon as any of the flock begin to die of this diſeaſe, the whole are immediately bled; and about $\frac{1}{4}$ oz. ſaltpetre, diſſolved in water, is given to each of them by a horn, which generally puts a ſtop to the infection, and is conſidered a good preventative for this, and alſo for what is called the *red water*, a diſeaſe ſo named, from the ſheep who die of it being full of

of red water when opened.—Mr Codd has improved the fleece of his own breed, by paying particular attention to ſorting the ewes and rams, according to the appearance and quality of their ſkins *.—Clip only once a year.—Don't ſhear the lambs, though ſome in the county do.

Taking leave of Mr Codd, who paid us every attention, we bent our courſe, through Yorkſhire, to the county of Durham.

YORKSHIRE.

In this, which is chiefly a feeding county, we ſaw a variety of ſheep paſturing on the commons, of different kinds, and purchaſed from various quarters.

We called on the Reverend Mr Cartwright at Doncaſter, who ſhowed us his newly invented machine for combing wool; by which, when it becomes general, Mr Cartwright calculates, that there will ariſe a ſaving of expence to the Britiſh manufacturer of 20,700 l. *per annum*. The expence of combing a pack of wool, in the ordinary way, is 2 l. 10 s.; and it coſts about 10 s. for charcoal. But, by this machine, it is done for leſs, than it coſts in the ordinary way, for charcoal alone; whilſt, at the ſame time, the ſtaple of the wool is infinitely better preſerved, and leſs broken. A number of manufacturers have already got theſe machines made, under Mr Cartwright's inſpection, who receives 10 s. of premium for every pack the machine combs, or prepares for being ſpun. Mr Cartwright has now given up his ſacerdotal functions, and has devoted himſelf to his manufactures; in which line, his ingenuity bids fair to make him a very uſeful member of ſociety †.

DURHAM.

* See a ſpecimen pulled off one of the tups, No. 18. of thoſe tranſmitted to the Society.

† Mr Cartwright ſeemed to coincide in opinion with ſeveral other

DURHAM.

Mr Robert Collins of Brampton, near Darlington, is an intelligent and conſiderable farmer, to whom we were fortunately recommended. He carried us round his farm; and ſhowed us his ſheep and black cattle, all remarkably good, and gave us the following information reſpecting the ſheep of that county.

Deſcription of the Tees-water, or Durham breed of ſheep.

Though there are ſeveral different breeds in this county, yet, what is known by the name of the Durham, or Tees-water

other manufacturers in thinking, that increaſing the quantity, is as neceſſary an object of attention, as refining the quality of wool; and ſtated, that, in the late conſiderable riſe upon the price of wool, the proportion was greater for the coarſe than the fine. In caſe of a fall, however, or ſlackneſs of demand, (as many ſeverely felt during the American war), coarſe wool would not ſell at almoſt any price, and, in ſome inſtances, was thrown into the dunghill. The high price of coarſe wool at preſent, is, perhaps, partly owing to a circumſtance, which Mr Cartwright mentioned to us, namely, the great demand for Engliſh carpets in China, occaſioned by the following circumſtance.—Some years ago, a captain in one of the Eaſt India Company's ſhips, having a ſmall carpet on the floor of his cabin, which happened to be ſo much admired and coveted by the China merchants, who had been aboard, that the captain, by agreeing to part with it, was enabled, at the ſame time, to diſpoſe advantageouſly of his whole adventure in a dull market. This having been communicated to his brother captains, they were in the practice, for ſome years, of carrying out, on their own account, a few carpets; which were anxiouſly ſought after, and ſold at a very advantageous price, inſomuch as at laſt to attract the attention of the Company, who ſuppreſſed the private concern of the captains; and now ſend out to China, on their own account, 15,000 pieces of carpeting annually; and this, perhaps, may alſo account for Mr Chaplin's ſpinning all his wool into carpet yarn.

water breed, is conſidered to be by far the moſt valuable.—At preſent, it is rarely to be found pure, being moſtly croſſed with the Leiceſter.—The breed is completely domeſticated.—The Tees-water was originally a long, looſe ſheep, and not ſo hardy as the Leiceſter, but becomes much hardier when properly croſſed.—It is the biggeſt ſheep in the iſland, (Mr Chaplin, who had croſſed with the Tees-water breed, gave us the ſame account of his ſheep, which we did not ſee,) and when pure, and well kept, for a proper length of time, weigh the moſt of any, but are not ſo eaſily fattened, unleſs when croſſed.—Moſtly fed off at 2 years old, weigh, at an average, about 28 or 30 lib. *per* quarter—one lately fed to 62 lib. *per* quarter.—The croſs of the Leiceſter, has conſiderably improved the ſhape, thickened the carcaſe, increaſed the weight of the fore quarter, and given a greater tendency to fatten.—The difference of weight between the hind and fore quarters, very various.—No difference remarked in regard to the number of ribs.—The peculiar and diſtinctive marks of this breed ſeems to be, a long and thin carcaſe, high legs, and a light fore quarter, pretty much like the Lincolnſhire, but, on the whole, rather larger and better ſhaped. The Leiceſter mutton is not conſidered finer in the grain than the Durham or Tees-water, yet, the croſs has been found to improve the quality, and even to increaſe the quantity of mutton produced by the latter, from the ſame quantity of food.—There is great variety in the weight of the Tees-water fleece, from 6 to 18 lib. The Leiceſter croſs has been found to leſſen the quantity. The average weight is about 9 lib. and the average price this year 10 d. and 10½ d. *per* lib.—Mr Collins ſaid, it was to be regretted, that the wool buyers do not make a ſufficient diſtinction in the price of wool, according to its quality—in general, not above 3 d. or 4 d. *per* ſtone, although the difference of quality in the different flocks, is much

much more conſiderable.—The wool is white, and not ſo long in the ſtaple ſince it began to be croſſed with the Leiceſter.—Mr Collins does not know the particular purpoſe for which it is beſt calculated.—It is chiefly a combing wool, and employed in the Darlington and Durham manufactures.—The carcaſe here is more attended to than the fleece.—Where the wool is long, the pelt is generally thick, and not ſo much produce in the carcaſe.—The ſheep are ſold off generally at two years old.—The average weight of tallow has never been aſcertained.—It is found, that the animal, which gets ſooneſt fat, has leaſt tallow.—The Tees-water have ſometimes one, ſometimes two, and ſometimes even three lambs, of which not very fond—the average is 1½.—Lamb, from the end of February, to the end of March—pretty well covered when lambed.—Mr Collins has not fallen into any particular mode of management.—Has no ſhepherd.—The ſheep kept in incloſures—rarely houſed, except in a very tempeſtuous night.—Do not ſalve.—Paſture, their chief food—turnips and hay given in winter, both to the *holding* and *feeding* ſtock, but only hay in time of great falls of ſnow.—The breed is ſubject to the rot.—Marſhy lands chiefly occaſion it—have not yet found out either preventative or cure.—Have no foot-rot.—Subject to what is called the *Black-water*, when about ſix months old, but ſince freſhening the paſtures by taking up, and again laying them down with graſs-ſeeds, this diſeaſe has not been ſo prevalent—no remedy applied for the *Black-water*.—In the neighbourhood of Darlington, no attention has hitherto been paid to the improvement of the fleece.—The ſheep are clipped once a-year in June, after *hand-waſhing*.—The ſheep on the hills and commons of this county, (ſome of which we ſaw,) are, in general, ſmall, and of various ſorts, principally, however, the black faced Scotch.

NORTHUMBERLAND.

The ſheep of this county may be divided into two claſſes—he moſt general and numerous flocks, are of the Cheviot reed, which are already well known to the Society. The ther, in the lower parts of the county, are what are called e Mug ſheep, which have been much improved by the eſſrs. Culleys and others, by their introducing the Leice-er, or Bakewell rams.

Among all the different breeds of ſheep, that have been entioned in the courſe of our report, we doubt much if y of them are calculated to amend the SHAPE and ARCASES of the *Cheviot breed*, which, we apprehend, nnot be materially improved for a hilly diſtrict. We have, wever, purchaſed a few of the Hereford breed, both ewes d rams, with a view, by croſſing, TO IMPROVE THE UALITY OF THE WOOL, in particular to diminiſh the antity of the coarſe parts, and to increaſe the quantity of fine. We alſo wiſhed to try how far that breed, in a re ſtate, will ſuit our part of the kingdom.

CONCLUSION.

Such are the principal facts and obſervations which have curred to us, in the courſe of our journey, in which, on whole, but little preſented itſelf applicable to our parti-ar ſyſtem of management. In the parts of England ough which we paſſed, ſheep, are in general kept, either paſtures, (that is, incloſed grounds,) or on commons, ere the whole flock, of all ſorts and ages, are mingled ether, and where there is no diſtinct boundaries, or ſepa-on of property; whereas, with us, each flock is divided four, five, ſix, and in ſome caſes, during the ſummer on, even ſeven lots, or *hirſels* as they are called, each on

a distinct part of the farm, and under a separate shepherd.—That system we consider to be infinitely preferable, to any thing we saw practised in the course of our tour. Where opportunities offered, we endeavoured to point out the advantages of the Cheviot management, as far as we thought that situation and circumstances would admit of it. But we do no think, that our system, can ever be introduced into England, at least into those counties, where the sheep are pastured in inclosures, unattended by shepherds, or, where flocks are kept on commons, in the careless manner which we have endeavoured to describe.

We cannot but express our regret, that we were under the necessity of dedicating so short a space, to complete so important a tour. We could not set out sooner, on account of our own private affairs; and, we were obliged to return home, about the middle of September, to attend our markets, which were held at that time. This prevented us from visiting several other counties, (particularly Dorset, Devonshire, Cornwall, Suffex, Kent, Essex, Suffolk, and Norfolk,) and from waiting on Sir Joseph Banks, President of the Royal Society, Lord Sheffield, Mr Arthur Young, and other friends to the improvement of the fleece, to whom we had letters of recommendation. It would have required, indeed, double the time we were out, sufficiently to have explored the counties through which we passed, and to have made the necessary investigations into the object of the tour, in that full and complete manner we could have wished; and we hope, that circumstance will be admitted as our apology, where we have been defective.

We trust, however, that we have been fortunate enough to collect, a great variety of useful information, on the subject recommended to our attention; and, we have the satisfaction of concluding our report, by signifying, the approbation *universally expressed*, of the patriotic views of the Society.

APPEN

APPENDIX,

No. I.

REMARKS, made in the Course of a Tour, through the Highlands of Scotland, for the purpose of examining into the State of Sheep Farming, in that part of the Kingdom.

BY

Mr KERR RICHARDSON.

AT the desire of the directors of the British Wool Society, I resolved, in the course of the summer 1792, to make a Tour through the Highlands of Scotland, with the view of communicating to that respectable and public spirited association, any observations which might occur to me, on the state of sheep farming, in that part of the kingdom, more especially on the western coast, which had not, as yet, been surveyed by any person commissioned by the Society.

For that purpose, in company with Mr Roger Marshall of Blindburn in Northumberland, and Mr Andrew Kerr of Arnidale in Strathnaver, I set out from Edinburgh on the 14th August 1792. The road to Inverness by Blair has been repeatedly described by many travellers, and being included in Mr Kerr's

Report to the Society, it is hardly neceſſary to make any additional obſervations, in regard to that part of the Journey.—In general, however, it may be remarked, that, all along this tract, there is very great room for improvement, both in regard to huſbandry, and ſheep farming —The road from Queen's-ferry to Kinroſs, paſſes through a country, moſtly in tillage, but in general, in bad order, and yielding very indifferent crops. A good deal of flax, however, ſeems to be raiſed in this diſtrict, which the inhabitants, at the time we paſſed through it, were buſy pulling and watering.—The hills to the right, ſeemed to be calculated for ſheep paſture; but the incloſures were carried ſo high up theſe hills, as to prevent a flock, of any conſiderable number, having a ſufficient range.—The ſoil between Kinroſs and Perth ſeems to be, in general, well calculated for raiſing turnips, which would be the beſt ſource of its improvement; and there is a range of hills (a branch of the Ochil) adapted for mountain ſheep; but the tenants are not allowed to keep any, leſt they ſhould injure the fences and the plantations.—In the neighbourhood of Perth, we ſaw great crops of wheat; and the ground ſeemed to be kept in very good order; but few or no turnips were to be ſeen, though Perth is undoubtedly a good market, both for fat ſheep and cattle.

From Perth, till we came within a few miles of Dunkeld, (when the country grows much wilder) the land is in tillage. —Whatever will grow corn is ploughed, however miſerable and precarious the return may be. Any ſheep kept here, are moſtly of the ſmall black-faced breed.—The road from Dunkeld to Blair, has often been admired as one of the pleaſanteſt, and moſt delightful rides in the Iſland of Great Britain.—The haughs or bottom lands are fertile and extenſive; and great quantities, of natural wood and plantations, are every where to be ſeen.—The lower grounds are let for about 20 s. *per* acre, with

with a right of paſture on the upper parts; but, as every one puts on ſtock according to his abilities, it is evident, that little good can be expected from ſuch a mode of management. —They are in uſe to put any ſheep they have, for three or four months in the winter ſeaſon, into houſes; the reaſon aſſigned for which, is, that ſuch a plan is neceſſary to preſerve them from dogs and foxes; and they even imagine, that they would otherwiſe periſh of cold. This, however, is a very groundleſs idea; as there ſeems to be no want of natural ſhelter. Giving hay to the ſheep in winter, is not at all practiſed in this part of the country. By any thing we could learn, ſnow continues longer on the Cheviot hills than in this neighbourhood; and we could hardly make them believe, that, in 1784, we were obliged to give our ſheep hay for 14 or 15 weeks. Nothing of that ſort, we were told, was ever heard of in Perth-ſhire.

On the road to Blair, particularly in the neighbourhood of that place, we paſſed by ſeveral eſtates, farmed by the proprietors themſelves, and cultivated to great advantage.—At Blair, the Duke of Athole has a farm, ſtocked with ſheep, a croſs between the black-faced and the Cheviot breeds. Some years ago, the Duke had a land Steward from Northumberland, who introduced there ſome of the Cheviot ſort. But no change having ſince taken place, they now partake much more of the nature of the black-faced. The hills, in this neighbourhood, ſeem the beſt adapted for keeping ſheep of any we have yet ſeen; and we were all of opinion, that the pure Cheviot breed would thrive as well there, as in any part of Scotland.

At Blair, Mr Marſhall was unfortunately taken ill; and after waiting for two days, in hopes of his recovery, he continued to be in ſo feeble a ſtate, that it was judged adviſable for him to return; and he inſiſted on my continuing the journey.

journey. This I agreed to, after expreſſing my ſincere regret, that the Society would thus be deprived, of the valuable and important obſervations of a ſtore farmer, whoſe character, undoubtedly ranks the higheſt on the Borders, for ſkill and experience; and who is peculiarly well qualified for judging, not only what ſort of ſheep is beſt calculated for every different diſtrict, but alſo, how to lay out farms to the beſt advantage, ſo as to yield the greateſt profit, both to the landlord and the tenant, and alſo what ſtock they are able to maintain.

Proceeding northward, in company with Mr Kerr, we came to Dalnacardoch.—The lower grounds, for the firſt eight miles of this ſtage, are moſtly in tillage, but farther on, the hills begin to grow high, with little or no bottom—Theſe hills, however, are well calculated for ſheep; producing, in conſiderable quantities, heather, ling, moſs, deer-hair, or bent, &c.; but the heather, we obſerved, was very old and ſtrong, and required much to be burned.—In the Cheviot hills, it is the univerſal practice, in the month of March, or beginning of April, to burn a certain quantity every year, as it produces a young growth, of which ſheep are remarkably fond.

From Dalnacardoch to Dalwhinnie, there is a ſucceſſion of hills of a ſimilar nature, with hardly any low-lands or hay-ground, excepting near a place called Dalnaſpidel, where Captain Macpherſon of Bellochroan has a farm.—As this country ſeems very ſtormy, it might be dangerous to keep any conſiderable ſtock of ſheep there, during the winter ſeaſon, unleſs the quantity of hay could be increaſed.—But great numbers of ſheep might be ſummered there; the principal part of which might be kept in the low-lands during the winter.

From Dalwhinnie we went to Pitmain, where there is a good deal of rich flat land, but the hills continue to be ſtormy.

ormy.—From Pitmain to Aviemore the low-lands ſtill in-
eaſe, but the hills grow more barren, being covered with
uſhwood and full of rocks, and, in ſome places, we paſſed
eat woods.—The reſt of the road to Inverneſs is through a
y barren country, where ſome bad kinds of ſheep and a
od many goats with ſome cattle and horſes, are kept.—
the immediate neighbourhod of Inverneſs, the ground
ms to be well cultivated, and the crops were early and a-
ndant.

From Inverneſs, we continued our route to Beauly, Ding-
l, and Tain, paſſing through a country, in general, better
culated for huſbandry than ſheep farming. Along the
ter part of this road, the corn land is in general under
d culture, and a great deal of ground, naturally cold and
ren, has been improved by the exertions of ſeveral public
ited proprietors.—In the hills of Roſs-ſhire, we were told,
they are getting into ſheep farming, but that, as yet,
common black-faced breed had alone been tried.

n Sutherland, the hills ſeem to be high, and well calcu-
d for ſheep. At Dunrobin Caſtle, there is a conſiderable
nt of ground, well incloſed, the graſs land of which is
ked with the beſt breed of black cattle we had yet ſeen.—
coaſt ſide of Sutherland ſeems to be narrow, but fertile.
remarked, in particular, the farm of Navidale, where Mr
lon raiſes crops, which do credit to his ſkill and induſtry
farmer.—Along that coaſt, we ſaw ſome ſmall ſheep,
native breed of the country, which might be much im-
ed, if croſſed by the Cheviot.—Great quantities of ſheep,
ere told, might be kept in the interior parts of Suther-
where heath and other articles of paſture abound more
on the coaſt.—We had the ſatisfaction of hearing in
erland, that the experiments, which have been tried in
county, with the Cheviot breed, have thriven beyond the
ſanguine expectations of thoſe who had made the trial.

The

The eſtate of Langwell, the property of Sir John Sinclair, a part of the county of Caithneſs, but bordering upon Sutherland, ſeems to be peculiarly well calculated for ſheep farming.—The hills are high, but of a better quality, than any we had yet ſeen.—Some part of this eſtate, Sir John has at preſent in his own poſſeſſion, which he ſtocked with Cheviot ſheep; but the tenants, in general, have nothing but black cattle and horſes; and ſome ſmall parcels of ſheep, of a very indifferent breed.

From Langwell we went to Achinvanich; and paſſ through a country, the greater part of which is well calculated for ſheep farming, as the hills are good, and abundance of arable ground for producing hay and turnips.—Some ſheep are kept there, but they are houſed all night, during the ſummer ſeaſon, leſt they ſhould injure the crops, and for the ſake of procuring the benefit of their dung as a manure.—The ewes are put into one houſe, and the lambs into another; and the ewes are milked in the morning before they are let out, ſo that the lambs can hardly thrive under ſuch a mode of management.

A great part of the country, between Achinvanich and Thurſo, particularly as you approach that town, is in tillage but worked up at a great expence, owing to the ſuperfluous numbers of oxen, horſes, and ſervants, they are in uſe to keep ſo that, if the lands were not cheaply taken, they could not maintain, from the profits, the ſtock kept upon the ground or the hands employed in the culture.—There is a prevailing mode in this neighbourhood of caſting *feals*, as they are called, cutting the ſurface of the common or paſture ground, and carrying it to the land intended for corn.—This, with a little ſprinkling of dung, is indeed the chief manure, that a great part of the land gets at preſent, there being no fallow, and no lime. We were not ſurpriſed, therefore, to ſee the land in very

ifferent order, and the crops but poor.—In the neighbourood of the town of Thurſo, however a better ſyſtem of farming followed. At Thurſo Caſtle, we ſaw ſome hundred acres well cloſed, and excellent crops of graſs, grain, and turnips, and Sir John Sinclair propoſes to lay down ſome general plan or the improvement of his eſtate, when new leaſes are to be anted, dividing his property into farms of a proper ſize, and warding the induſtrious by premiums and otherwiſe, there every reaſon to hope, that as good a ſyſtem of huſbandry will e eſtabliſhed there, as in any part of the kingdom.

We found at Thurſo ſome branches of manufacture, eſtaliſhed by Sir John Sinclair, in conjunction with the gentlemen of the country and the inhabitants of the town.—A tanery is carried on with great ſpirit; and, at a bleachfield in he neighbourhood, linen ſeems to be bleached as well as in ny part of Scotland; a conſiderable ſum has alſo been ſubſcribd for carrying on a woollen manufacture, and other branches f induſtry.

From Thurſo to Rheay, we paſt through a good deal of aable ground, and ſeveral extenſive commons capable of culivation.—At Sandſide, the arable lands are all incloſed, proucing good crops of every kind, particularly turnips, which e ſown in drills, and looked as well as any we had ſeen in he South of Scotland.—Mr Innes, the proprietor, lately tocked ſome part of his eſtate with the black-faced breed, hich ſeem to anſwer well.—Between Sandſide and Bighouſe, e paſt a hill particularly well adapted for ſummering lambs nd young ſheep, though perhaps hardly graſſy enough for wes.—Mr Mackay of Bighouſe, ſome years ago, ſtocked a art of his eſtate with black-faced ſheep from Argyleſhire, hich ſeem to thrive well; but in 1791, the Britiſh Wool ociety having ſent a number of rams from the Cheviot hills, the northern parts of Scotland, two of them were purchaſed

ed by Bighouſe, who put them among his flock, and on inſpecting the lambs produced by that croſs, in the ſame himſel with the true Argyleſhire breed, it evidently appeared, that they were fully from 1 s. 6 d. to 2 s. more valuable, than the lambs of the black-faced ſort, though the latter were remarkably good of their kind.—Some old wedders of a ſimilar croſs were alſo greatly preferable to the pure black-faced.—The eſtate of Bighouſe, ſeems to be much calculated for carrying on ſheep farming on a great ſcale, and with much advantage, the hill grounds being very extenſive, there being a conſiderable extent of flat meadow land, which yields a great quantity of hay, and a good deal of ground adapted for producing corn, turnips, &c.

Thence we proceeded to the eſtate of Mr Honyman of Strathy. The farm of Strathy is poſſeſſed by Mr Mackay of Bighouſe, who cultivates it with great attention and ſucceſs, and is rewarded by plentiful crops.—There, lime is made uſe of as a manure, burnt with peats, there being no coals.—Our next ſtage was Armidale, a part of Mr Honyman's property, which, at Whitſunday laſt, (1792) was entered into by Mr Kerr.—The farm is of great extent, being four or five miles along the ſhore, and ſeven or eight miles up the country.—It ſeems to be a well accommodated farm, having not only plenty of hill paſture, but alſo a ſufficient quantity of arable ground to grow corn for the uſe of a family, and to produce hay for a flock in winter.—There is alſo paſture, calculated for ſheep of every different age and quality, ſo as to make it a complete breeding farm; and if the woolien and other manufactures ſucceed at Thurſo, which might make a demand for fat ſtock there, there ſeems to be a ſufficiency of arable land, to raiſe turnips for fattening ſheep and cattle for that market.—In the paſture lands there is a neceſſity for burning the heath, which is too old and ſtrong, and of draining the wet

wet, boggy, or marſhy grounds, alſo of ſowing part of the lands in tillage with graſs ſeeds (particularly what is intermixed with the paſture lands), and of cutting down any bruſh wood on the banks or burns, which is very detrimental to the ſheep by tearing off their wool.—This farm, in the courſe of laſt ſummer, was entirely ſtocked with the Cheviot breed; ſuch of them as came up, early in the ſeaſon, were in very good condition, but the droves of a later date, conſiſting moſtly of lambs, were driven rather haſtily through Roſs-ſhire, in conſequence of ſome diſturbances which took place there, reſpecting ſheep farming, and were conſiderably injured by that circumſtance; but there was no doubt, that they would ſoon recover, from the freſhneſs of the paſture.—Should this experiment, of a Cheviot farmer ſettling in Strathnaver, ſucceed, (as there is every reaſon to believe will be the caſe), it will not only be of ſervice to the firſt adventurer, but alſo to the landholders of the north in general, whoſe income will ſoon be increaſed by following the ſame plan.

From Armidale, we croſſed the country to Langwell, to examine more particularly, than we could do in our way to Thurſo, the Cheviot flock at that place.—We there met with Sir John Sinclair the proprietor, Mr Mackay of Bighouſe, and ſeveral gentlemen of Caithneſs; and after viewing the ewes, we were ſurpriſed to find them in ſo good a ſtate; being what are commonly called draft ewes, which are generally from 5 to 7 years old, and having been driven north very late in the preceding ſeaſon, having alſo undergone, in winter 1791-2, the ſevereſt ſtorms that had been ſeen in that country for many years. The crop of lambs which they have produced, were fully as good, and indeed, in our opinion, rather ſuperior, to any lambs that we had ſeen in the ſouth country this year; and there is every reaſon to be-

lieve, that this experiment will anſwer the purpoſe, for which it was principally intended, namely, *to ſatisfy the public, that an abſurd and ridiculous idea, too generally entertained, that the Cheviot breed of ſheep, could not thrive in the Highlands of Scotland, was perfectly ill founded.*—This ſhould induce the Landholders, in that part of the country, not only to give proper encouragement to ſuch ſouth country farmers, as may be willing to take ſheep farms in the north, but alſo to occupy and ſtock part of their own lands, with the Cheviot breed, in order to open the eyes of the natives, who are either averſe to ſheep in general, or ſtrongly prejudiced in favour of the black-faced breed, which are infinitely inferior.

At Langwell I parted with Mr Kerr, and having returned to Inverneſs, I was there favoured with ſome letters of recommendation from Mr Inglis, a reſpectable merchant of that town, to his friends in the Weſt Highlands. I firſt proceeded to Fort Auguſtus.—The land along the road, for ſome miles from Inverneſs, is a good deal incloſed and planted; and ſome ſmall parcels of a very indifferent ſort of ſheep are kept there, which are put into houſes during the night. But near Fort Auguſtus, I found ſeveral large flocks of the black-faced ſort, ſuperior to any of that kind that I had yet met with, but yielding little profit, in compariſon of what might be looked for on ſuch paſtures, the white wool only ſelling for 7 s. and the laid, or ſalved, for 5 s. *per* ſtone. The farmers are of opinion that ſalving is of uſe in this country; and they find, by experience, that the ſheep they keep white, are always in worſe condition than the laid, but they find it difficult to procure a ſufficient number of proper hands to carry on this part of the buſineſs *.—In this part of the country, they never wash

* The purpoſe of ſmearing, or ſalving, is now beginning to be better underſtood; and there is reaſon to believe that a mix-

ture

waſh their ſheep before clipping.—Their draft ewes are ſold only for 6 s. 6 d. but that is leſs to be wondered at, as ſome of them are kept till 8 or 9 years old. Their three years old wedders fetch from 12 s. to 14 s. Wedder lambs 5 s.—The uſual proportion of butter and tar for ſalving, is from 20 to 30 lib. of butter, to 12 pints of tar. I received ſome intereſting information, on the ſtate of ſheep farming in this country, from Mr Stewart, an intelligent farmer in the neighbourhood, who is barrack maſter of Fort Auguſtus.—He ſeems well diſpoſed to try the Cheviot breed, from the favourable accounts he has received of their ſuperiority over the black-faced.

I learnt here, that Mr M'Pherſon of Cullachie, who occupies a conſiderable farm in this neighbourhood, bought, ſome years ago, about twenty Cheviot rams, in order to try how they would ſucceed.—But from the attachment which the farmers in general have to the black-faced breed, and the idea, that the Cheviot require more maintenance, and were of too ſoft a nature for the Highlands, he was prevailed upon, by the influence and perſuaſion of his neighbours, who aſſerted that he would injure his ſtock by ſuch a croſs, to give up all thoughts of perſevering in that experiment. He diſpoſed, therefore, of his rams and ewe lambs, keeping a few wedder lambs, rather from curioſity, than from any hopes of ſucceſs.—Having afterwards had the pleaſure of meeting with Mr M'Pherſon, he informed me, that the wedder lambs he had kept, had done fully as well, and proved equally as hardy, as the pure black-faced;—that the improvement, in the article of wool, was conſiderable, but that he could not aſcertain to what extent, as the wool of his flock was ſold promiſcuouſly,

ture of tobacco liquor and ſpirit of turpentine, with a little brimſtone, anſwers the great object of ſmearing, (which is that of killing the vermin and preventing the ſcab,) fully as well as tar and butter.

miſcuouſly, and that he was now determined, notwithſtanding the prejudices of his neighbours, to give a fair trial to the Cheviot breed, which, he had no doubt, would anſwer fully as well, and would prove more profitable than the ſort with which his farm is now ſtocked.

From Fort Auguſtus to Latterfinlay, the hills were ſtocked with ſheep; for which the country ſeemed to be peculiarly well calculated, abounding more with graſs than any I had yet ſeen; in the whole courſe of my journey and being alſo plentifully ſupplied with low land for growing corn, and hay and turnips.—It was with regret, that I ſaw ſo inferior a ſort as the black-faced, univerſal over a country ſo well calculated for better ſheep, and no idea of keeping the ſheep in different flocks, according to their age and quality, which is ſo uſeful a practice, where it can be adopted.—There are a few farms, upon this road, ſtocked with black cattle, the property of ſmall tenants who lived in miſerable huts, partly built with *feal*, or the pairings of the ſurface, and partly of dry ſtone, without either clay or mortar.—Here, no ſuch cuſtom is known as giving hay to ſheep in ſnowy or froſty weather; and, though they are always left to ſhift for themſelves, it is ſeldom that much loſs is ſuſtained.—The farmers principally complain of the injury their flocks ſuſtain, from the heavy rains and boiſterous winds, to which that part of the country is ſo ſubject.

In this part of the journey, I waited on Mr Roſs, miniſter of Kilmanavaig, a ſheep farmer, who reſides at the foot of Ben-Nevis, the higheſt hill in Scotland.—For ſixteen years paſt, he has never ſeen it without ſome ſnow on the top, during the whole year.—His pariſh is one of the moſt extenſive in Scotland, being 60 miles long and 26 wide.—He lives at a farm, which he rents off the Duke of Gordon, having as yet no manſe or glebe allotted for him.

At

At Fort-William, I met with Mr M'Intoſh, who deals pretty extenſively in wool, which he generally ſends to Yorkſhire.—He complains much of the tenants for not waſhing the fleece before it is clipt, and not paying proper attention to keep it dry afterwards.—He alſo ſaid, that a ſufficient quantity of butter was not mixed with the tar for ſalving the ſheep; and that the ſmearing was laid on with too liberal a hand, which rather added to the weight than improved the quality.—This gentleman has conſiderable ſheep farms; and ſeemed inclined to make a trial of the Cheviot breed, provided he could get a renewal of his leaſe.—Without ſome proſpect of advantage, he obſerved, that no tenant of common ſenſe could venture to be at the trouble and expence of trying any experiment.—Fort-William ſeems to be a good ſituation for eſtabliſhing a woollen manufacture, as there is abundance of water, a great number of inhabitants, and a good harbour for ſhipping.

From Fort-William, I went to Glencoe, where I met with Mr M'Donald of Achdrichtan, who was amongſt the firſt who introduced ſheep into that part of the country; and, it is ſaid, poſſeſſes at preſent upwards of 8000.—He has no doubt that the Cheviot breed would thrive in Argyle-ſhire, and in the other countries of the Highlands, where ſheep are likely to anſwer.—He ſells his wool at preſent for 7 s. the ſtone, if white, and 5 s. if laid, both unwaſhed; and he imagines, that by waſhing the ſheep before clipping, he would loſe one fourth part of the weight.—His ſheep paſtures are very extenſive, and remarkably ſteep and rocky.—He ſays, that, ſince he has begun to ſtock with ſheep, the heath has greatly diſappeared, and graſs grown in its room.—In this part of the country, they ſeem diſpoſed to try, to what perfection they can bring the black-faced breed, without calculating the enormous loſs they will ſuſtain in the interim, by perſevering in ſo unprofitable an experiment.

Mr

Mr M'Donald, very properly, avoids tupping his gimmers, or one year old ewes, a very bad practice in many parts of the Highlands, as it keeps the ewe ſtocks ſmall; and, in bad ſeaſons, the lambs are of little value, as ewes of that age cannot ſupply their lambs with a ſufficient quantity of milk.—It is a cuſtom, in this neighbourhood, for farmers, when they take a farm, not to buy a ſtock immediately, but to raiſe one by degrees, a proof either that the tenants are very rich, or that the rents are not very high, otherwiſe they would be obliged, that they might be enabled to pay their rents, to be fully ſtocked from the beginning.

In Appin, many of the hills are well calculated for ſheep paſture, but ſome of them, on the contrary, are entirely covered with bruſhwood and plantations.—The iſland of Shuna, the property of the Marquis of Tweeddale, lies oppoſite to Appin houſe: It is moſtly graſs; and Mr Stewart, who rents it, tried laſt winter a new experiment for that part of the country, namely, ſtocking it with three years old wedders, which would not probably coſt him more than 14 s. or 14 s. 6 d. *per* head; and which, after keeping on the iſland for one winter, he ſold to the Glaſgow butchers for a guinea.—There are many other farms in this part of the country, where the ſame practice might be followed.

From Appin to the Ferry of Connie, the land is good, and moſtly ſtocked with ſheep: The ground in tillage is chiefly of a dry and ſandy ſoil, but ſeems to produce rather indifferent crops. In the neighbourhood of Bunaw, the ground is of a more graſſy nature, but covered with bruſhwood. The woods are ſtocked with ſmall horſes, which are found not ſo apt to injure woods as black cattle or ſheep. —In the neighbourhood of Port Shuan, the land that is not covered with wood, ſeems to be very much calculated for ſheep paſture, though at preſent, ſtocked with horſes and black cattle, and ſome in tillage.—From Port Shuan to In-

verary,

eraray, the hills are covered with graſs of an excellent uality; and here there is every inducement for introducing fine woolled breed of ſheep.—Some fat lambs are fed on me of the farms here, which meet with a ready market at Glaſgow, &c.

On the road to Inveraray, I had the good fortune to meet ith Mr Campbell of Combie, a member of the Britiſh Wool Society, who has ſeveral farms ſtocked with the black-ced ſheep, but who propoſes, in the courſe of next ſpring, o try the Cheviot breed, which he has no doubt will an-ver.—This gentleman, ſeems to have more knowledge of heep farming, than any I had yet met with in the High-nds.—He has, this year, adopted the plan of keeping his res in one flock, his wedders in another, and his hogs in third, inſtead of keeping his flocks promiſcuouſly, as is ommon in the Highlands.—Every ſhepherd has thus his wn charge by itſelf; and, of courſe, muſt pay more atten-on to it, than if he had a mixed charge with a number of her ſhepherds.—Mr Campbell has already viſited the Cheviot hills, which ſatisfied him of the great ſuperiority of he Cheviot breed; and that the experiment, how far they ould thrive in Argyleſhire, was well worth trying.—He al-o has a farm, on which he propoſes to feed wedders during he winter, for the Glaſgow market, as Mr Stewart did laſt inter, on the iſland of Shuna.

His Grace the Duke of Argyll, got laſt year ſome draft wes from the Cheviot hills, and ſome from the neighbour-ood of Langholm, which, though of the ſame ſort, are ckoned of inferior quality. The former ſeem to anſwer markably well; and will probably encourage his Grace to erſevere in the Cheviot breed, for which ſo conſiderable a art of his property is ſo peculiarly well calculated.

From Inveraray towards Luſs and Dumbarton, the ewe ock is, in general, very ſmall, and in bad condition; owing partly

partly to the irregular manner they have of drafting their ewes, but ſtill more ſo, to the practice of giving tups to their gimmers or young ewes.—Some of their ewes alſo are kept, till they are 8, 9, and 10 years old; at which age, a ewe is paſt her prime, and, conſequently, unfit for breeding a healthy ſtock; but there is every reaſon to expect a ſpeedy and advantageous change in theſe reſpects, as ſheep farming is now beginning to be better underſtood in the Highlands.—Between Inveraray and Luſs, and between Luſs and Glaſgow, I paſt a tract of country, a great part of it the property of Sir James Colquhoun, Baronet, which ſeemed to me, admirably calculated for ſheep farming, but unfortunately covered with a very inferior breed, and under a very improper ſyſtem of management.

On the whole, there cannot be a nobler field for the exertions of a public ſpirited ſociety, than to eſtabliſh a fine woolled breed of ſheep, and the proper management of them, in the Highlands of Scotland.—The members of the Britiſh Wool Society may be aſſured, that there is not a part of the country, which I had an opportunity of viſiting, (and I rent land myſelf as bad as any that I ſaw), which under proper arrangements, * is not fit to maintain the Cheviot breed of ſheep; the profit of which is infinitely greater, than that of any other ſtock that can be put upon it.—I conſider that to be a point of ſuch infinite conſequence to the kingdom at large, that I ſhould feel highly gratified, if any feeble exertions in my power, could have contributed to ſo deſirable an object. Were that to take place, and were the Highlands of Scotland properly ſtocked with the moſt valuable of all animals, and were the wool produced in the country, manufactured on the ſpot, there are few parts of Europe, where the inhabitants could live in a ſtate of greater happineſs and proſperity.

No.

* That is to ſay, not overſtocking, and keeping the young ſheep, during the ſummer, on the pooreſt paſture.

No. II.

*DESCRIPTION of the Cheviot * Breed of Sheep, with an Analyſis of a Cheviot Sheep Farm.*

BY

SIR JOHN SINCLAIR, BARONET.

PERHAPS there is no part of the whole iſland, where, at firſt ſight, a fine woolled breed of ſheep, is leſs to be expected than among the Cheviot hills. Many parts of the ſheep walks there, conſiſt of nothing but peat bogs and deep moraſſes.—During the winter, the hills are covered with ſnow, for two, three, and ſometimes even four months, and they have an ample proportion of bad weather during the other ſeaſons of the year; yet there a ſpecies of ſheep are to be found, taking all their properties together, equal, if not ſuperior, to any other in Great Britain, *for a mountainous diſtrict*, and which will thrive even in the wildeſt parts of it.

Theſe ſheep are long bodied;—they have, in general, thir-

* This breed was formerly known under the name of the *long* ſheep, from the length of their make, in contradiſtinction to the common black faced breed, which were called the *ſhort* ſheep; their ſhape being much ſhorter; but, as the former were found in the greateſt perfection, in the neighbourhood of the *Cheviot Hills*, it was thought adviſable to give them a name from a diſtrict ſo memorable, both in the hiſtory, and in the legends of the country; and hence the name has been given them of the *Cheviot Breed*. Thoſe who wiſh to give this breed a fair trial, ſhould purchaſe from the ſtocks of Mr Redhead of Chatto, Mr Laing of Glenderleith, Mr Marſhall of Blindburn, Mr Scott of Lethem, Mr Pringle of Helterburn, Mr Robſon, Mr Smith, and Mr Hedley, and other ſtore farmers in the neighbourhood of Jedburgh.

teen, but ſometimes fourteen ribs, on each ſide;—their ſhape is excellent, and their fore quarter in particular, is diſtinguiſhed by ſuch juſtneſs of proportion, as to be equal in weight to the hind.—Their limbs are of a length to fit them for travelling; and to enable them to paſs over bogs and ſnows, through which a ſhorter legged animal, could not well penetrate;—they are polled, white faced, and have rarely any black ſpots on any part of their body;—they have a cloſer fleece than the Tweeddale, or Linton breed, which keeps them warmer in cold weather; and prevents either rain or ſnow from incommoding them;—their fleece is ſhorter, and, of conſequence, it is evidently more portable over mountainous paſtures;—they are excellent ſnow breakers; and are accuſtomed to procure their food, by ſcraping the ſnow off the ground with their feet, even when the top is hardened by froſt;—they have never any other food, (unleſs when it is propoſed to fatten them) beſides the graſs and natural hay, produced on their own hills.—They are, it is ſaid, leſs ſubject to diſeaſes, than the common black-faced kind, particularly to what is called the *braxy* or the *ſickneſs*.—They ſell at a good price to the grazier, and their value for feeding is riſing every day; the draft or caſt ewes when lean, now fetching from 12 s. to 16 s. a piece, and three year old wedders from 18 s. to 22 s.—Their weight when fat, at four years old, is from 17 to 20 lib. *per* quarter; and the mutton, when fed upon heath, and kept to a proper age, is fully equal, in taſte or flavour, to any that the Highlands produce.—Lambs fed for the butcher, on the milk of the ewe, now fetch from 8 s. to 10 s. a piece.—From eight to nine fleeces of white wool make a ſtone of 24. lib. weight, and from 6 to 8 fleeces when the wool is laid or ſmeared.—The laid or ſmeared wool ſold, in 1792, at from 18 s. to 20 s. and the white from 20 s. to 22 s. Some went as high as 23 s. and from the improve-

ments

ments now going forward, it will ſoon fetch 30 s. if not 40 s. er ſtone. Their ſuperiority over the Tweeddale or common lack-faced breed, is incontrovertibly proved by a variety of xperiments. Mr Thomas Scott at Lethem on Carter Fell, mountain about 1600 feet above the level of the ſea, exhanged, in 1773, with Walter Hog in Etterick foreſt, five hite-faced for as many black-faced tups, but had every reaon to regret the experiment, which was far from being the aſe with Mr Hog.—Mr Roger Marſhall at Blindburn, in orthumberland, came to that farm in 1769, and purchaſed e ſtock upon the ground, among which there were many lack-faced ſheep.—Theſe he completely extirpated, and und it greatly to his advantage.—So much convinced, inced, are the farmers in the neighbourhood, particularly thoſe Etterick foreſt, of Eweſdale, and Liddeſdale, of their ſuerior excellence, that they are now converting their flocks, quickly as poſſible, into the Cheviot breed.

The progreſs that has been made in improving this breed, rticularly in regard to meliorating its wool, is in the higheſt gree ſatisfactory. About twenty years ago, the average of e white and laid wool was about ten fleeces to the ſtone, hich ſold for about 8 s. whereas now the value is not only ore than doubled, but the weight is ſo much increaſed, that, an average, eight fleeces will make a ſtone. Even this exllent breed, however, is ſtill capable of ſome improvement, d the experiments, which are now going forward, will ſoon certain, by what means that improvement can beſt be proed.—The ſhape of the animal, for a hilly diſtrict, is almoſt ought to perfection; but the wool requires, 1ſt, to be ſtill er in the pile, 2dly, ſhorter in the ſtaple, ſo as to make it t only more portable for the animal itſelf, but fitter for be manufactured into cloth—3dly, thicker in the coat, ſo as keep the animal warmer;—and, laſtly, more equal in point

of

of quality, *(a circumſtance of very great importance,)* ſo that the whole fleece may be as nearly as poſſible the ſame.—Theſe are qualities which the Spaniſh, the Hereford, and the South-down breeds poſſeſs in very great perfection; and if once the hardineſs, the excellent carcaſe, and the other advantages of the Cheviot breed, were united to theſe properties, *Hill ſheep would be brought to their greateſt height of perfection.* All theſe different croſſes are now under trial; and, as yet, every one of them ſeems to have ſucceeded, ſo that any of them may be followed with ſucceſs.—In regard to the original Cheviot breed, they have been tried, on a greater or leſſer ſcale, in every part of Scotland; and, on every occaſion, they have anſwered in the wildeſt parts of the country, and even in places where no ſheep were ever kept before, at leaſt in any quantity.

The ſtore farmers, in the neighbourhood of the Cheviot hills, having brought the proper management of the mountain breed, to very great perfection, it was imagined, that a general idea of the ſyſtem they purſue would be acceptable, particularly to thoſe who may be deſirous of engaging in the profitable occupation of a ſhepherd; with that view, the following analyſis of a Cheviot farm was drawn up; which will explain alſo, ſome of the general principles, on which a ſtore farm ought to be conducted.

A ſheep farm may be of any ſize, according to the ſtock or capital of the farmer, but in general a *complete farm,* (or one which poſſeſſes within itſelf the different ſorts of paſture, calculated for ſheep of every different age and quality) ought to contain about 2000 ſheep, which may be divided in the following proportions.

1. Thirty ſcore ewes, - - - - 60
2. Eighteen ſcore and ten of three-year-old wedders, - 37
3. Eight ſcore of young ewes, of 2 years old, called *gimmers*, for ſupplying the place of older ewes,

Carried over 97

Brought over	970
when they are drawn to be ſold off, - -	160
4. Eighteen ſcore and ten of young wedders, or dinmonds, - - - - -	370
5. Twenty five ſcore of lambs, - - -	500
Total ſtock,	2000

Beſides the above, a complete farm ought to keep about ten rams, or at the rate of ſixty ewes to a ram, and alſo the number of ſheep, the paſture of which is uſually allowed to the ſhepherds.—The ſtock is commonly divided into four diſtinct flocks, or *hirſels* as they are called,—1. The breeding ewes. 2. The wedders and young ewes. 3. The gimmers and dinmonds, and 4. The lambs; each under a ſeparate ſhepherd, who, if he has had ſufficient experience, may, at leaſt, take 500 ſheep under his care.—The ſhepherds have their board, but no wages or profit, except from the ſheep they are allowed to paſture, which varies, according to their ſkill and character, from 45 to 60 ſheep each; conſequently there muſt be additional paſture, for about 200 ſheep belonging to the ſhepherds.

To make a farm quite complete, there ought alſo to be graſs for ſix or ſeven cows, five horſes, and, if poſſible, a hundred acres of arable ground, for corn, hay, and turnips; but ſo complete a farm is rarely to be met with.

The great advantage of ſuch a farm is, that, when once it is well ſtocked, there is no occaſion for *buying* any thing, the farmer having only to diſpoſe of his draft ewes and wedders, when they come to be of a proper age for ſale; whereas, on ſmaller farms, it is hardly poſſible to breed one's own ſtock, and to keep them on, until they can be ſold to the beſt advantage; and a farmer that is obliged both to buy and to ſell, has not only a more troubleſome, uncertain, and expenſive occupation, (being obliged to attend many more markets,

kets, and having a greater number of people to deal with), but his chance of profit, it is evident, muſt be doubly precarious.

The diviſion of the ſtock into different *hirſels*, is an excellent part of the Cheviot management.—In large ſtocks, they carry it the length of ſeven *hirſels* in ſummer, and ſix in winter; namely, 1. Lambs. 2. Hogs. 3. Gimmers. 4. Dinmonds. 5. Ewes. 6. Three and a half-year-old wedders; and 7. in ſummer, a hirſel for ſummer lambs. On this plan, every part of the flock, can be ſent to that part of the paſture, for which it is beſt calculated; and young ewes are prevented from breeding too early, before they come to their full ſtrength, by which a ſtock is very apt to be materially injured.

The extent of a Cheviot farm varies according to the goodneſs of the paſture, but, in general, the calculation is about a ſheep to an acre; though good land will maintain more, and bad land not ſo many.

The calculation of the rent, to be paid for ſuch a farm, is a very important conſideration. It has, of late, been greatly on the increaſe; and, in the opinion of ſome, is getting ſo high, that, unleſs there is the ſame demand for ſtock, that exiſts at preſent, and unleſs the fleece is greatly improved in value and in price, the rents now inſiſted on, may, in ſome caſes, be found too high. The common calculation, according to the old rates, was, as follows:

600 Ewes, at 5 s. for the paſture of each ewe,	L.	180	0 0
370 Wedders, at 3 s.		55	10 0
160 Young ewes, at 2 s. 6d.		20	0 0
370 Dinmonds, at 2 s.		37	0 0
500 Lambs, or hogs, at 2 s. 6d.		62	10 0
Total		325	0 0

This

This was the old rent; but a farm, that would paſture 2000 Cheviot ſheep, if it is well ſituated, and the paſture wholeſome, and not ſubject to diſeaſe, will now yield the average rent of 4 s. for the paſture of each ſheep, or, in general, about L. 400 *per annum*, and perhaps in ſome caſes more.

The profit to be derived from ſuch a farm is, as it ought to be, conſiderable; the following being the amount at which the annual ſales may be eſtimated:

1. 2000 Fleeces, at 3 s. each, - -	L.	300	0 0
2. 160 Draft ewes, at 13 s. - -		104	0 0
3. 370 Three-year old wedders, at 20 s. -		370	0 0
Total,		774	0 0

Beſides ſome draft lambs, the produce of which is uncertain; but, on the whole, there would be a return, after paying L. 400 of rent, of about L. 374 *per annum* for profit, contingencies, intereſt of money, *&c.* Such is the return at preſent, but there can be no doubt, that, by improving the quality of the wool, the fleece of the Cheviot breed may be brought to 5 s a piece, which would be an addition of L. 200 to the above ſum; making the produce of each ſheep about 10 s. and the income from ſuch a farm about L. 1000 *per annum*; ſo that ſheep farming may be found as profitable an occupation, for a perſon of induſtry and talents, as any that can be followed.—The value of the above ſtock of 2000 ſheep, if they were to be bought at once, may be calculated at from 1200 l. to 1500 l. according as the markets ruled; but if the Cheviot breed were to be brought into a country, where another breed had formerly been kept, or which had been formerly appropriated for cattle, the following plan, for getting as quickly as poſſible into a ſtock ſuited upon the farm, (a point of very great importance), might be adopted.

Suppoſe

Suppoſe the entry to your farm is in May; keep your paſture *freſh*, that is to ſay, without any ſtock upon it, for two or three months; and about the end of July, or beginning of Auguſt, purchaſe about 20 three-year-old rams, and about 1000 of the youngeſt and beſt draft ewes you can get, which, at that time, can be bought for 13 s. a piece; and, if purchaſed early, perhaps for 12 s. as the ſtore farmer thereby ſaves ſo much of his paſture. On that plan, the price of your ſtock would be as follows:

1000 Draft ewes, at 13 s. -	L. 650	0 0
20 Rams, about - - -	50	0 0
Total,	700	0 0

Some, however, prefer buying what are called heavy ewes in ſpring, though, in that caſe, they cannot be driven very far. But, at any rate, every one muſt perceive, at what an inconſiderable expence, a farm producing ſuch great returns may be ſtocked.

From the preceding obſervations, ſome idea may be formed, of the great profit that may be derived, from covering the mountains of England and Scotland, with a fine wooled breed of ſheep.—It is to be hoped, that the time is not far diſtant, when mountain ſheep will yield at the rate of 10 s. a piece *per annum*, and when the income to be derived from a flock of 2000 ſuch ſheep will be about 1000 l. *per annum*. —There are few tenants, and ſtill fewer proprietors, either in the Highlands, or in the ſouthern parts of Scotland, or in the hilly diſtricts of England, to whom this ought not to be a moſt important piece of information.

No. III.

PLAN for Converting Cattle Farms, into Sheep Farms, without Depopulating the Country.

BY

SIR JOHN SINCLAIR, BARONET.

THE practicability of covering the Highlands of Scotland, with innumerable flocks of ſheep, inſtead of maintaining an inconſiderable number of cattle, and the certainty, that a fine woolled breed, would thrive there, are unqueſtionably among the moſt important diſcoveries, that ever have been made, for the advantage of a particular diſtrict, whilſt, at the ſame time, they muſt very materially tend to promote the general intereſts of the kingdom at large.

Their importance to the fortunate proprietors, who have Highland eſtates in their poſſeſſion, will appear from the following ſtatement.—A cattle farm of 100 l. *per annum*, if put under the coarſe woolled Tweeddale breed, becomes, at once, worth double that ſum; but, if it is ſtocked with the fine woolled Cheviot breed, it is well worth 400 l. and will probably be worth 800 l. as ſoon as the improvements now carrying on, for augmenting the value of the Cheviot breed, are brought to perfection.

Their importance to the public at large, is infinitely greater.—The Highlands of Scotland may ſell, at preſent, perhaps from 200,000 l. to 300,000 l. worth *per annum*, of lean cattle.

—The ſame ground will produce twice as much mutton, and there is the wool into the bargain.—If covered with the coarſe woolled breed of ſheep, the wool might be worth about 300,000 l. the value of which, can only be doubled, by the art of the manufacturer; whereas the ſame ground, under the Cheviot or true Mountain breed, will produce, at leaſt, 900,000 l. of fine wool, the original value of which the manufacturer can quadruple, and, conſequently, can make worth 3,600,000 l. in woollen goods. Thus the difference is, as 300,000 l. of lean cattle, is to 600,000 l. worth of mutton, and 3,600,000 l. of woollens. At the ſame time it is neceſſary to obſerve, that the importance of this great alteration, both to individuals and to the public, will principally depend on the introduction of a proper breed of ſheep, and the proper management of them, at once into a country.—The market for wool, might be over ſtocked, (at leaſt ſome perſons may entertain apprehenſions upon the ſubject,) unleſs a ſpecies of wool is produced, the beſt calculated of any for general purpoſes, and for which there muſt always be a demand.—Beſides, the great additional rent which the proprietor may receive by the introduction of a fine woolled breed, and the greater additional profit of the tenant, enable both the one and the other to furniſh employment, and to act with generoſity, to any of the ſmaller tenants, who, in conſequence of the new ſyſtem, may be deprived of their little farms; but who ought not to be loſt to their country, or driven from their native homes, and who may eaſily be placed in a more comfortable ſituation than they formerly enjoyed.—That additional profit is very great; for it is now pretty well aſcertained, that though from 1 s. to 1 s. 6 d. a piece is not an unreaſonable rent, for the paſture of a Tweeddale ſheep, (by which, at the ſame time, the old rent under a cattle ſtock is doubled,) yet for the paſture of a Cheviot ſheep, whoſe food is

ſuppoſed

ſuppoſed to be the ſame, both in regard to quantity and quality, the Cheviot, or any other ſet of farmers, can well afford to pay from 2 s. to 2 s. 6 d. and even 3 s. in the Highlands, as it coſts them from 4 s. to 5 s. on the borders.

The great objection to the introduction of ſheep, is the *ſuppoſed neceſſity* of depopulating the country, wherever cattle farms are converted into ſheep farms. But that is totally founded on miſtake.—I think it a duty therefore, incumbent upon me, who have taken an active concern, in promoting the improvement of Britiſh Wool, to point out the means, by which the population of the country, will be rather increaſed than decreaſed, by this important meaſure.

The Plan to be purſued for that purpoſe, (and it is one indeed, which I propoſe to adopt myſelf, on an eſtate in the hilly parts of Caithneſs,) is ſhortly as follows:

1. When any proprietor wiſhes to convert the ſtock on his property, from cattle to ſheep, he ſhould, in the firſt place, have a plan of the eſtate made out by ſome intelligent ſurveyor; and ſhould then procure a ſkilful farmer, from the beſt ſheep country in Scotland, (the neighbourhood of the Cheviot hills,) to lay out the ground, in a manner the beſt calculated for ſtore farms.—For, it is proper to obſerve, that the different ſorts of ſheep, require different kinds of paſture, with which none but an experienced ſhepherd is acquainted, and, that it is of the utmoſt conſequence, to have ſuch an arrangement adjuſted from the beginning.

2. If the proprietor does not reſide upon the ſpot, ſo as to manage the plan himſelf, he muſt procure a very intelligent overſeer, a man of prudence and addreſs, and, if poſſible, a native Highlander, who, by ſpeaking the language of the country, can more eaſily gain the confidence of the people, for the purpoſe of conducting the whole plan by his directions.—On an extenſive Highland eſtate, no premium would

would be too great for ſuch a man, particularly if he united a knowledge of ſheep farming, with the other requiſites.

3. It is abſolutely neceſſary, all over the Highlands, to clear the diſtrict of *foxes*, before ſheep farming can properly be introduced.—The damage they do to a flock, can hardly be imagined by any one, who has not experienced the effect of their depredations,—the Highland foxes being much ſtronger than the Lowland ones, and killing old ſheep as well as lambs.—A thorough bred fox-hunter, therefore, ought to be got, with a complete ſet of dogs, particularly from Argyllſhire, Badenoch, or Lochaber, where they have brought the art of killing foxes to ſuch perfection, that any country, it is now aſcertained, can be cleared of that vermin, however rocky or woody it may be.

4. In many parts of the Highlands, a ſkilful *woodman* is eſſentially neceſſary, to cut down all bruſhwood, which, by tearing off the wool, is not only attended with the loſs of the fleece, but alſo materially injures the animal, by expoſing it to cold and wet.—Skilful *ditchers* are alſo neceſſary, for draining, in the beſt manner, any wet or boggy ſpots in hills; and, in ſome places where the ground is dry, for ſpreading the water over the ſurface, which brings up a conſiderable quantity of graſs.—In hilly countries alſo, a *thatcher*, who underſtands the art of making heather roofs, would be a great acquiſition.—Experienced perſons in theſe two laſt profeſſions can eaſily be procured, from the hilly parts of Roxburghſhire.

5. Theſe preliminaries being ſettled, the proprietor, if he has not a farm in his own hand, ſhould take one fit to maintain from 1 to 2000 ſheep; and ſhould bring the beſt breed of Cheviot ſheep, and the moſt experienced ſhepherd he can find, to ſatisfy the natives of the country, that a fine woolled breed will thrive on his eſtate; and alſo to inſtruct them

em in the proper mode of managing that ſpecies of ck.—For that purpoſe, he ought to prevail on the ſons d brothers of his tenants, or young men of a proper age the neighbourhood, to acquire a knowledge of ſheep rming, from the ſhepherd he has brought. For, as ſoon a ſufficient number of them are completely inſtructed, in art of keeping ſheep, which cannot fail to be the caſe the ſpace of two or three years, the plan may go rapidly ward.

6. As ſoon as there are a ſufficient number of native pherds, and the flock of the proprietor has ſo increaſed, t he can ſell his young ſtore, at an eaſy rate to his tenants, hich may be the caſe in about three years,) it ſhould then recommended to them, to diſpoſe of their cattle, and to chaſe ſheep bred upon the ſpot, which are much more ly to thrive, than thoſe brought from another country.

. In ſettling the rent with the native tenants, it is ne- ary, that the landlord ſhould, at firſt, take a part of it in , that is to ſay, in wool and ſheep; as, from their want xperience, they would naturally be alarmed, were they at to be charged with an adequate rent in money.—And ed ſome aſſiſtance and information muſt be given, by the lord or his overſeer, to the tenants, in the diſpoſal of r wool and ſheep, until regular markets are eſtabliſhed in neighbourhood.

aſtly—Though many ſmall tenants, by joining their ca- ls together, and purchaſing from 250 to 500 ſheep each, hiring common ſhepherds, might, perhaps, continue he poſſeſſions which they formerly enjoyed, yet ſuch an ation can hardly be effected, without removing ſome in- duals.—Theſe, therefore, the proprietor ought to collect, ſmall villages, properly ſituated, for the purpoſe of carry- on either fiſheries or manufactures. There employment

may

may be furniſhed to the young, and from the profits of thi
change of ſyſtem, an adequate maintenance may be given t
thoſe, who are too old to procure themſelves ſubſiſtance.
Both humanity, and ultimately, the intereſt of the pro
prietor himſelf, however, ſeem to require, that a plan, of ſ
extenſive and ſo complicated a nature, ſhould not be to
raſhly gone into; and, in particular, that, any conſiderabl
body of men ſhould not be removed from their ancie
places of reſidence, until not only proper houſes a
poſſeſſions were prepared for their reception, but alſo, un
proper means of employing them are ſecured.

No. IV.

ccount of the Shetland Sheep, with Obſervations upon the Nature of the Different Breeds, to be found there, &c. addreſſed to the Society for the Improvement of Britiſh Wool.

BY

THOMAS JOHNSTON.

IT is not eaſy to determine, with preciſion, whence the inal Shetland breed was derived, as no record or tradition that fact, is now extant; but, it ſeems to be the received nion of the country, that the firſt ſheep were brought from nmark, while theſe iſlands made a part of the territories hat kingdom; and that opinion ſeems to be ſtrengthened, the great ſimilarity between the Daniſh and Shetland ſheep, ch is ſo remarkable, that it can hardly be overlooked by moſt ſuperficial obſerver.

The native breed of ſheep to be found in Shetland, are, in eral, very hardy, and of a much wilder temper, than any er I have been acquainted with, particularly ſuch as paſ- in ſmall iſlands or *holms*. The paſture, in theſe holms, n general, very dry, and plentifully ſupplied with rich s and a variety of wild herbs, which render the ſheep, are kept in them, very wholeſome, fat, and in good ts, and far ſuperior to thoſe who feed on the hilly paſ- s.

The native breed, however, is now much diminiſhed ughout the whole country; and, in ſome places of it, is intirely

intirely extinct, in conſequence of the introduction of foreign breeds; which have been carried on to a conſiderable extent, by many of the proprietors of ſheep ſtocks, in theſe iſlands, with a view of increaſing the quantity of the wool, and of improving the ſize of the animal. In ſome places of the country, the new breed have anſwered according to the moſt ſanguine hopes of the proprietors, the quantity of wool having been ſo much increaſed, as to weigh from 10 to even 12 pounds *per* fleece. In other places, however, the foreign breed has not been found to anſwer according to expectation; it has degenerated conſiderably, both in the quantity and quality of the wool. It ſeems to be doubtful, therefore, whether the introduction of a foreign breed of ſheep into theſe iſlands, has been attended with advantage to the country, or otherwiſe. I am of opinion, that, if equal pains and expence had been beſtowed upon the improvement of the native breed, as upon the introduction of the foreign, the country would have derived more ſure and laſting advantages from that meaſure; for it is to be obſerved, that the native breed, being of a more hardy nature, reſiſt the ſeverity of the winter months with eaſe, while the foreign breeds, ſoftened by the milder influence of a more temperate climate, are unable to withſtand the extreme cold and exceſſive rains, to which they are expoſed in theſe iſlands; and, of courſe, numbers of them either die during the winter months, or are ſo weakened, as to be unable to combat the ſeverity of the following ſpring.

Beſides all this, the wool which theſe ſheep carry, although conſiderable in point of quantity, yet is remarkably coarſe and harſh; inſomuch as to be unfit for any thing but the coarſeſt cloths, and the ſtuffs uſed by the common people. Whereas the true native wool, is of the ſofteſt texture, fit for the fineſt manufactures, and in ſome inſtances has been found to rival Spaniſh wool itſelf. Though the difference in

in regard to weight, therefore, the difference is, in general, above four to one, yet, on the whole, the value of the native fleece far exceeds the other. Add to this, that the foreign breeds, do rarely, if ever, thrive in hilly paſtures, (only anſwering in the ſmall iſlands and holms); and as the greater part of the ſheep paſture in Shetland, conſiſts of hill paſture, theſe breeds can never be of general advantage; for theſe reaſons I am inclined to think, that a proper attention to the improvement of the native breed of ſheep in Shetland, would have been productive of more ſolid and laſting advantages to the nation at large, as well as to the proprietors of ſheep in that part of the kingdom.

The quality of the Shetland wool is affected, in ſome meaſure, by the paſture on which the ſheep are fed. The rocky paſture (which is generally covered with coarſe graſs and long heather), produces ſheep of a ſtrong hardy nature, but with coarſe fleeces, and much varied in the colour; this ſort of paſture is found to produce the coarſe wool, whether found in the hill grounds, or in the iſlands or holms.

The ſheep, that paſture upon what paſſes under the name of black-berry heather, lobba and moſſy paſture, almoſt always bear the fineſt wool. The ſilver gray wool is thought to be the fineſt and ſofteſt in Shetland; but the black, the white, the mourat, or brown, is very little inferior; the lobba and the berry heather are preferred for feeding ſheep; but the lobba is reckoned rather better than the other. It reſembles oat brier in its appearance; is very long, of a hard ſubſtance, and is in bloom all the ſeaſon. It is ſeldom entirely covered with ſnow, becauſe of its length, and the ſnow diſſolves ſooner on it, than on the graſs below; and, on that account, it is more acceſſible to the ſheep, when deprived of every other recourſe.

The native or *kindly* breed, which bear the ſoft or *cottonny*

fleeces, as they are called, are rather of a delicate nature. Their wool is ſhort and open, and deſtitute of a covering of long hairs, found upon the coarſe woolled ſheep, which ſerves to ſcreen them from the rain, and to preſerve them from the inclemency of the weather. Theſe ſoft woolled fleeces are very often loſt, or rubbed off, during the winter, or early in the ſpring, which, it is ſuppoſed, might be prevented, by clipping or ſhearing the ſheep, in place of pulling off the wool, a barbarous practice, tending to weaken the ſheep, and to hurt the length of the ſtaple. There are ſome ſheep to be found, (from whom alone the erroneous ideas, which ſome have been led to intertain of the Shetland breed of ſheep, could be derived), that carry coarſe wool above, and ſoft fine wool below. Theſe have three different ſucceſſions of wool yearly; two of which reſemble long hairs more than wool, and are termed, by the common people, *fors* and *ſcudda*. When the wool begins to looſen in the roots, which generally happens about the month of February, the hairs or ſcudda ſpring up; and when the wool is carefully pnlled off, the tough hairs continue faſt, until the new wool grows up about a quarter of an inch in length; then they gradually wear off; and, when the new fleece has acquired about two months growth, the rough hairs, termed *fors*, ſpring up, and keep root, until the proper ſeaſon for pulling it arrives, when it is plucked off, along with the wool, and is ſeparated from it at dreſſing the fleece, by an *operation*, called *forſing*. The *ſcudda* remains upon the ſkin of the animal, as if it were a thick coat, a fence againſt the inclemency of the ſeaſons, which provident nature has furniſhed, for ſupplying the want of the fleece.

The green moſſy paſture is, for the moſt part, to be found along the ſea ſhores. It is in general a wet ſoil, covered with graſs of a white ſpungy nature, and intermixed with graſs and herb

herbs of various kinds, particularly a ſpecies of herb is to be found in conſiderable quantities, much reſembling heckle teeth. The ſea coaſts of Shetland are covered with ſea weed, eſpecially in winter, when very great quantities are thrown aſhore, by the violence of the ſea and tides.—The ſheep, during the winter ſeaſon, and eſpecially while the ground is covered with ſnow, devour the ſea weed very greedily; and often, during long and ſevere ſnows, they have little elſe to live on. Nature ſeems to have imparted to them a perfect knowledge of the times, at which this food may be procured; for, immediately upon the tide beginning to fall, the ſheep, in one body, run directly down to the ſea ſhores, although feeding on hills ſeveral miles diſtant from the ſea, where they remain until the tide returns, when they return back to their uſual haunts. The ſheep are expoſed to great danger, and many are frequently loſt, by the tides carrying them off, when they happen to go down, into what are called *goes*, or *coves*, being very often unable to get up, ſometimes from weakneſs and hunger, and ſometimes from the ſteepneſs of the rocks, by which means they remain a prey to the next tide, which ſweeps them off in numbers.

The wet moſſy paſture abounds with coarſe heath and *hargh*, intermixed with ſome rough hard graſs of different kinds. Near the ſea ſhores, the graſs is remarkably fine, (occaſioned, it is ſuppoſed, by the inriching quality of the ſea ſpray,) and generally extends to the diſtance of from 60 to 100 yards up the country: then the paſture above deſcribed prevails, and covers a large track of ground.—The ſheep frequent the paſture, near the ſea ſhore, in queſt of the fine graſs, during moſt part of the ſummer; but, in autumn, they are obliged, by the ſtorms and winds, to betake themſelves to the more hilly parts of the paſture, where they muſt feed, during the remaining part of the ſeaſon, upon graſs

graſs far inferior to that which the ſummer months ſupplied. This change of food, produces diſeaſes, (to be afterwards taken notice of,) which, in many places, prove fatal to hundreds of them.—The ſheep, that run on this paſture, are of a ſmall ſize, much varied in the colour of their fleeces, and carrying wool of a pretty fine nature.

The ſheep, in the iſlands of Shetland, have not hitherto been treated with that attention, which an object of ſuch moment, to the country at large, ſeems to merit. A ſhort account of it, however, is here offered; the accuracy of which will hardly be doubted, when it is conſidered, that the author has had the charge of different flocks of ſheep, for many years, and has beſtowed much pains and attention, in correcting miſtakes in the management of ſheep flocks, as practiſed in the different pariſhes of Shetland.

On the Main Land, that is, in the largeſt inhabited iſland of Shetland, the proprietors of ſheep ſtocks, about the end of March and beginning of April, gather their ſheep in folds, or what are termed here *punds* and *erues*, that they may be the eaſier managed throughout the ſummer, and for pulling off the wool, marking the lambs, &c. They are generally weak about this ſeaſon, and on that account eaſily managed. If the punding, however, is delayed for any time beyond this ſeaſon, the ſheep generally become wild; and, in that caſe, the inhabitants are obliged to have recourſe to the aſſiſtance of dogs for catching them. Theſe dogs are trained for the purpoſe; and, when properly bred, perform their part with great dexterity, laying hold of the ſheep in ſuch a way, as not to hurt them at all. They will take any particular one from a flock that is pointed at; and will never attempt to run after lambs, unleſs particularly directed to do ſo. But this can only be expected from properly trained dogs. Many of thoſe uſed, are very miſchievous, and hurt the

the ſheep much in the catching. Sometimes the ſheep are loſt, by running down ſteep rocks, when purſued by the dogs, tumbling over precipices, and at other times falling into the ſea.—A properly bred dog, always ſeizes the ſheep by the off foot, by the noſe, or the ear. For ſix months in the year, the attention beſtowed on the flocks, by a great many proprietors in Shetland, is hardly worth mentioning; while others, who are not ſo blind to their own intereſt, look after them a little better, in particular driving them for ſhelter in time of ſnow, to what are called *bulls* or dry places, by which the lives of a few are preſerved; but without herding, it is evident, that great numbers muſt periſh for want of care and attention, in a wide extended paſture of many miles.—The ſheep of one paſture generally herd together, although often the property of a hundred different individuals. They are known by marks cut upon their ears, every different proprietor having a different mark. But what has contributed more to the prejudice of the ſheep in Shetland, than any thing elſe, is the erroneous practice of keeping too many rams. I have ſeen, in a flock of ſixty ewes, no leſs than twenty rams, not one of them above one or two years old, and theſe the very worſt in the flock, both for ſize and colour; ſome of them carrying the coarſeſt wool, and ſometimes, of two or three different colours.—In moſt paſtures in Shetland, the beſt lambs are cut, and the worſt kept for the next years breeders; and no perſuaſion can induce the common people to vary this abſurd practice. I have myſelf had the charge of ſmall flocks, in different paſtures, for about ten years, and I found this practice followed amongſt the whole of them. But, convinced of the impropriety of it, I determined to try a different method; and accordingly ſelected the beſt rams for breeders, and never kept above four rams to 300 ewes. In the ſpace of ſix years, the wool was much improved

improved in quality, and increaſed in weight from one, to two, and even to three pounds and a half. In the courſe of my experience among theſe flocks, I obſerved, that the marks of a ram, who is the moſt likely to have white woolled lambs, are theſe—His fleece muſt be white; his palate white; his hoofs white; alſo his horns and the bridge of the noſe—When theſe marks are to be found, I think it will certainly follow, that the lambs will be white—I have tried the experiment frequently, and never knew it fail. The horns ſhould be wide ſet; for when the roots of the horns are cloſe ſet, the head is contracted, and the ſheep will moſt probably die at twelve or eighteen months old. The horns may be twiſted off, when the ſheep is a month old, with ſafety, but I prefer thoſe who never had any. The body ſhould be long, the legs ſhort, and the hoofs broad; the head ſmall, and the countenance pleaſant. Theſe are marks which generally diſtinguiſh proper breeding rams*. It would be unneceſſary for me to take up the time of the Society, by entering into any particular deſcription of the Scotch and Engliſh breeds to be found in Sherland, as their nature muſt be much better known to the Society, than to me. Suffice it then to ſay, with regard to the native breed, that, when it is continued free from intermixture with other ſheep, it continues much the ſame, without varying, either in the quantity of the wool, or the weight of the carcaſe. Too many of them, however, are now croſſed with the Scotch and Engliſh, and ſome even with the Dutch, from which mixture, a ſheep is produced, long bodied and ſhort legged, carrying coarſe wool, even on the neck and ſhoulders, and the tails, which are about ſix inches long, being ſhaped like a flounder; hence they have got the name of the *flounder tail ſhee*

* If ewe lambs are wiſhed for, the beſt ram to breed from is, what is called, *a rigland*.

ſheep. They carry from four to ſix pounds of wool, and the carcaſe weighs from 30 to 40 lib.—In regard to the Scotch and Engliſh breeds, they generally clip from 8 to 12 lib. of wool. I have myſelf ſhorn 16 lib. from one of them, but that was a very rare inſtance; and, I believe, never happened, but in the iſland of Hoys, one of the beſt graſs holms in Shetland. In this iſland, I have ſeen 27 ewes having 54 lambs, each of which ſold for 7 s. *per* head. The Shetland ſheep in general, however, only ſell at the following prices: wedders from 5 s. to 6 s. ewes from 3 s. to 4 s.; year-olds from 2 s. to 3 s. wedder lambs from 1 s. to 15 d. and the ewe lambs from 15 d. to 2 s. Sterling.

The age, to which the ſheep in Shetland are kept, varies, according to the nature of the paſture on which they are fed. On the berry heather and lobba paſtures, they are at their prime from five to ſeven years old; but ſometimes they are kept longer, although to little advantage. On the wet moſſy paſtures, they are at their prime, from 3 to 5 years old. On good paſtures, both in the Main Land and the ſmall holms, they are beſt from 2 to 3 years old, and, if kept longer, they fall off, both in the fleece and carcaſe.

The value of the Shetland wool, depends on its quality: The coarſe is generally ſold at from 8 d. to 10 d. *per* lib. while the fineſt fetches from 2 s. to 2 s. 6d. About forty years ago, the wool was ſold at about 5 s. *per* liſpund, or thirty ſix lib. good and bad, without diſtinction. The inhabitants in Shetland, however, have ſince diſcovered the true value of this commodity; and the great repute, in which the native wool is held all over the kingdom, when manufactured into ſtockings, will, it is hoped, induce the proprietors of ſheep ſtocks, to turn their attention to the improvement of this valuable article, which has hitherto been ſo ſhamefully neglected.

The

The diſeaſes, to which the Shetland ſheep are ſubject, are various; and differ according to the paſtures on which they are fed. The *winſter* is a fatal diſtemper amongſt ſheep kept in rich paſtures.—It is occaſioned by ſpringing, or running hard, when the animal is fat. The blood veſſels of the kidneys then burſt, and flow through the inteſtines, which occaſions an inſtant ſuffocation, and proves immediate death. It reſembles in its effects an apoplexy. The only preventative known for this diſtemper, is, to turn the lambs, about the month of Auguſt, into a poor paſture, in order to reduce the extraordinary fatneſs, which occaſions this diſeaſe. The *water*, or *ſhell ſickneſs*, is a diſeaſe peculiar to thoſe ſheep, who feed on the hilly paſtures, at a diſtance from the ſea ſhores. It is occaſioned by a quantity of water, lodged between the ſkin and the rim of the belly, which, when allowed to remain without application, occaſions a great degree of heat, forming a cruſt over the tallow. They then loath their food, become quite diſpirited, and, at laſt, fall a ſacrifice to the diſtemper. The beſt cure for this diſeaſe is ſalt and water, which acts as phyſic, carrying off the ſuperfluous matter from the body of the animal, and cleanſing their blood from humours, which are bred by the different kinds of graſs, on which they feed. This diſeaſe is rarely known amongſt the ſheep, that paſture along the ſea ſhores, the graſs, on the borders of which, is neceſſarily covered with ſaline particles, from the ſpray; and, at any rate, they have conſtant opportunities of eating ſea weed, which has the ſame effect upon them as the ſalt and water.

The *ſturdy*, or *dropſy of the brain*, is another diſeaſe incident to the Shetland ſheep. The firſt ſympton of this diſeaſe is, giddineſs of the head, and ſtupefaction.—The only effectual cure, known for this diſtemper, is opening the ſkull, and extracting the water lodged between it and the brain.

The Shetland ſheep are, at preſent, much neglected, although

though an object of ſuch moment to the country at large and in particular to the tenants, by whom they are chiefly reared. The attention of the landlords (a few excepted) is too much occupied by other purſuits, and the improvements that might eaſily be effected through their influence, have, till of late, been very little attended to. The tenants, bigotted to their ancient cuſtoms, which, in many caſes, they deem ſacrilegious to break through, are ever enemies to novelty and experiment. The firſt improvement ſurely, is that of herding; for were the ſheep properly tamed, it would ſave the lives of many hundreds of them, who periſh by the ſea, or fall ſacrifices to diſeaſes, which by proper care might be eaſily cured. For improving the breed and the wool, it is neceſſary, that attention be paid both to the rams and to the ewes, intended for breeders, by ſelecting the beſt of both, for that purpoſe, and reducing the number of rams in each flock; which at preſent is multiplied far beyond what is either proper or neceſſary.

No. V.

OBSERVATIONS

ON Mr Johnſton's Account of the Shetland Breed of Sheep.

THE above is certainly the beſt account of the Shetland breed of ſheep, that has, as yet, been communicated to the Britiſh Wool Society. And, on the peruſal of it, the following obſervations will naturally occur to the reader.

1. It is evidently the opinion of the very intelligent writer of that paper, that, to preſerve the beſt breed of native Shetland ſheep, and to bring them to perfection, are points of the utmoſt conſequence to that part of the kingdom, and from which much benefit to the country at large may be expected. 2. It farther appears evident, from that account, that there are two native breeds in theſe iſlands, owing to which, ſuch a variety of opinions has been formed upon the ſubject. One of theſe breeds, called the *kindly*, or *cottonny fleeced*, is altogether covered with fine wool. The fleece of the other is intermixed with thoſe hairs called *fors* and *ſcudda*. Unfortunately, from neglect and miſmanagement, and the introduction of foreign breeds, the former has become extinct in ſome diſtricts, and very ſcarce in others, ſo that no time muſt be loſt in receiving them from total annihilation.—3. The kindly breed, as it is called, is certainly the moſt valuable, but in conſequence of the thinneſs of its fleece, is of a tender and delicate nature, an unfortunate circumſtance for the breed

a country ſo much expoſed to the inclemency of the ſeaſons. It may be entitled to ſome experiments, therefore, to know, whether croſſing the Shetland breed with ſome thick fleeced, fine woolled ſheep, ſuch as the South Down, the Hereford, or the Spaniſh, might not be the means of producing a ſpecies of wool of very ſuperior value, and at the ſame time, would not thicken the fleece, ſo as to make it a better protection for the animal.—Laſtly—It would be deſirable to aſcertain, what breed ought to be recommended to the attention of the natives of Shetland, and what is the moſt likely mode of bringing them to perfection.

In regard to the laſt point, there can be no doubt, that the breed producing the pure white wool, without the ſmalleſt mixture of hair, (particularly any black or brown hairs), ought to be excluſively propagated in the Shetland iſlands.—The ſuperior excellence of that ſort of fleece, for all the finer purpoſes in which combing wool can be uſed, is unqueſtionable. For ſoftneſs and for luſtre, no wool does equal it; and the ſkin, with the fleece on it, can be converted into a fur of very great value; ſome ſpecimens of which have been already ſent to the China market.—But, as the leaſt intermixture of black or brown hair deſtroys both the perfection of the fleece, and the beauty of the fur, extirpating ſuch hairs, therefore, by ſelecting the beſt and pureſt white rams and ewes for breeding from, is the greateſt object, that can poſſibly be recommended to the attention of the proprietors of Shetland. The other wools produced in Shetland, as the ſilver gray, the black, and the brown, though of a ſoft and fine quality, can never rival the pure white in value; and ought, therefore, to be extirpated as ſoon as the white fleeced breed of ſheep can be introduced in their room.

As to the beſt mode of bringing the Shetland breed to perfection, the premiums, given by the Britiſh Wool Society, have

have already had ſome very important conſequences; but it would be extremely deſirable, in addition to the improvement which theſe premiums may produce, that ſome iſland, ſuch as that of Unſt or of Fettlar, where the pure white is found in the greateſt abundance, or the iſland of Hoys, were devoted to the ſole purpoſe of rearing the pure white fleeced ſheep, under the ſuperintendance of ſuch a zealous and intelligent perſon as Mr Johnſton ſeems to be.—If that breed were once brought to perfection in any particular iſland, there would be little difficulty to ſpread them over the reſt, and alſo at the ſame time to introduce a proper ſyſtem of management, in which the natives of theſe iſlands ſeem to be miſerably deficient.

If the plan for the improvement of its breed of ſheep, were to take effect, there is every reaſon to believe that Shetland would find a more ſecure and valuable treaſure in its flocks, than even in thoſe fiſheries, on the extenſion of which its inhabitants are ſo much bent. At the ſame time, it is evident, that the one need not materially interfere with the other; and that if both are properly attended to, thoſe iſlands muſt enjoy a greater degree of proſperity, than it is poſſible for them otherwiſe to attain.

It is farther only neceſſary to add, that it would be of the utmoſt conſequence, for the purpoſe of bringing the native breed of Shetland to perfection, that ſome agreement were made, with the clergy of thoſe iſlands, in regard to their tythes. A plan for that purpoſe might certainly be formed, more advantageous to them, to the tenants, and to the proprietors, than taking their ſmall tythes in kind. No oppoſition to any fair propoſal, to that effect, can be apprehended from a body of men, diſtinguiſhed for their good ſenſe, their liberality, and public ſpirit.

No.

No. VI.

DESCRIPTION of the Breed of Sheep in the poſſeſſion of the Meſſrs Culleys of Northumberland—In anſwer to the Queries circulated by Sir John Sinclair.

THE breed we have, are entirely from thoſe which have been ſo highly improved by Mr Bakewell.—To them we were naturally partial, knowing well, that Mr Bakewell had brought his breed to the greateſt perfection of which they were capable, by picking the beſt ewes from all the beſt flocks in his neighbourhood, or indeed, wherever he could find them, and putting the moſt valuable tups to them.—The breed is completely domeſticated, and of ſo quiet a diſpoſition, that it is well known, a fence of three feet high will turn them at any time, the tupping ſeaſon excepted.—This peaceable diſpoſition is probably one reaſon why they become ſo early and ſo eaſily fat.—That they are exceedingly hardy, is evident from this circumſtance, that they can be kept in good condition, in the deepeſt ſtorms of ſnow, and the ſevereſt winters, equal to, if not better than, any other low-land breed in the iſland, and ſooner recover after any inclement ſeaſon.—The breed may be called pure, as Mr Bakewell has not had a croſs from any other, for upwards of 20 years, and for theſe 20 years paſt, we have had no other tups but from him.

The

The ſhape of the breed is the circumſtance for which they are moſt remarkable; being finer and more truly proportioned in their mould or form, thicker and broader compared to their height, and above all being diſtinguiſhed for a greater propenſity to grow fat, and for ſupporting a greater weight of carcaſe, upon a very fine clean ſmall bone, than any other breed.

The weight of the ſheep varies in proportion to its keeping, but ſheep of this ſort have been fed to upwards of 50 lib. *per* quarter.—It is ſuppoſed on the whole, that it pays beſt to feed wedders off, at from 1½ to 2½ years old. After that age they do not pay ſo well for what they eat, though they certainly keep on in improving for ſome time longer.—Taking the medium at two years old, they weigh in general about 24 lib. *per* quarter.—The number of ribs is commonly 13 on each ſide, but ſome have been killed with 14.—This breed is not remarkable for producing much tallow.—Indeed thoſe that are the moſt inclined to fatten on the outſide, always have the leaſt tallow or rough fat within.

This breed is not only more inclined to fatten, but when fat, the meat is finer in the grain or texture, than any other lowland breed, though perhaps not equal in flavour to the Cheviot or Highland mutton.—There is alſo a greater quantity of meat in proportion to the bones, and there is no breed, that will bring ſo many pounds of mutton from a given quantity of food.

The average weight of the fleece, in this northern county, (Northumberland) taking wedder, hog, and ewe together, is about 7 lib. and the value, according to the price of wool in 1792, 9 d. *per* lib. or 5 s. 3 d. *per* fleece.—This is the higheſt price ever given for that ſort of wool, in this neighbourhood, but in Yorkſhire and farther ſouth it fetches 10 d. *per* pound, and even more.—The wool is all white, and fit for combing, being from 5 to 15 inches long.

There

There are ſeldom more than two lambs at a birth. In general, two thirds of the ewes have one lamb, and one third two. They lamb at any time from Candlemas to May, but moſtly in March.—They are pretty well covered with wool when lambed.

The mode of management is generally as follows.—We keep the ſtore ewes and ewe hogs in ſummer on old paſtures.—The ſheep fed for the butcher, get clover and other new graſſes in Spring, Summer, and Autumn.—We give turnips to all our ſheep in winter except the breeding ewes, and we wiſh to give even them turnips, for 2 or 3 weeks before they lamb, if we can ſpare them any *.

The principal diſeaſe, to which this breed is ſubject, is called the *middling ill*, in other countries known under the name of the *red* or the *black water*.—The only preventative (for we know

* We put our young ewes, or *gimmers* as they are called in this country, to the tup, as well as our old ones; but the older ewes are put to the tup 8 or 10 days before the younger ones, becauſe we do not like that the latter ſhould lamb ſo early as the former, on account of their being always ſcarcer of milk, and from that circumſtance apt to forſake their lambs; but by lambing a little later in the ſpring, when the graſs begins to riſe, they are not liable to the misfortune of wanting milk. The breeding ewes are in general ſold off at 3 or 4 years old. But the method we purſue (which we find the beſt mode of keeping our ſtock in perfection) is, to ſell our worſt ewes of all ages, and to keep the valuable ewes as long as they will breed. Nay we have ſometimes kept a favourite ewe, after ſhe had given over milking, putting her produce to ſome other ewe to ſuckle. We always fatten our draught or culled ewes ourſelves, but the generality of draught ewes, in this country, are ſold to go into Yorkſhire, for the purpoſe of breeding and feeding fat lambs. We allow 80 or 90 ewes, when given ſingly, to a year old, or dinmond tup, (called in Yorkſhire, a ſhearing, and farther ſouth a ſhear hog, or ſhearing) and 120 ewes to older tups. But when one or more tups are put among a flock of ewes, the average ſhould not exceed from 50 to 60, to a dinmond, and from 80 to 90, to older tups.

know of no cure) is good keeping.—This diſorder attacks the hogs (ſeldom older ſheep) when ſinking in condition, but if put in time on turnips, rape, or any other good keeping, it is a total prevention.—We are ſeldom troubled with the *black-leg*, or *quarter ill* as it is called in different counties, and not much of late with *the halt* or *foot rot*, except in wet ſeaſons as in ſummer laſt 1792. Paring the hoof and applying corroſives will generally do, if not very bad; but if proud fleſh appears between the hoofs, then poultices are neceſſary, and not unfrequently cauſtics to ſubdue the proud fleſh.

The fleece is clipt but once a year, generally in June.—None of the breeders, in this part of the country, have hitherto made any experiments for improving the fleece, either in quantity or quality.—What effect the preſent advance in the price of wool may have, is not yet known; but ſuch is the profit derived from an attention to the ſhape and carcaſe, and ſo much are we convinced by experience, that the breed that has the greateſt tendency to fatten, has the beſt conſtitution, (a moſt eſſential point in a northern climate), that whatever wool we grow, we muſt in the firſt place attend to carcaſe—At the ſame time we have no doubt, that we could, by attention, perſeverance, and proper croſſing, cover our breed, with either coarſe or fine wool, as might be thought moſt adviſable.

The preceeding account of that breed of ſheep, for which they are ſo juſtly celebrated, does infinite credit to the liberality and public ſpirit, the ſkill and intelligence of the Meſſrs Culleys, by whom it was tranſmitted. They have alſo very obligingly communicated the following obſervations, reſpecting that union of huſbandry and ſheep farming, ſo deſirable in arable diſtricts, which they have no ſcruple in aſſerting, (and their are none whoſe opinions on ſuch a topic are better entitled to attention and credit,) is by far the beſt

mode

mode of cultivating either the richeſt or the pooreſt arable lands *, both for the occupier and the public.

Arable land, in general, may be divided into the clayey or deep, and the light or friable ſoils.

A wet and clayey ſoil is not calculated for turnips, and is dangerous for the rot, conſequently not fit for breeding ſheep, but in ſuch a ſoil, the following rotation may be adopted, in the courſe of which ſheep may be introduced.—Break up for oats.—Then ſow beans or peaſe, or both, in drills, horſe-hoe'd.—Next wheat.—After which, make a clean fallow for barley, with which ſow clover and rye-graſs, the former with a liberal hand. Theſe ſeeds cannot be better employed than in fattening *lamb and dam* for the butcher, which, in all ſituations, is a ſafe and lucrative game, but particularly in the neighbourhood of a large town, or where manufactures are eſtabliſhed. For that purpoſe the ewes ſhould be bought *(from ſound land)* in the autumn, and tupped early for breeding lambs to make fat, to be ſold off as quickly as poſſible, that the ewes alſo may have a better chance to get fat in the autumn.

In light, dry, and *turnip* ſoils as they may be called, a very different plan muſt be followed. One field, or portion of the farm, of good quality, and ſo dry, as to be free from any riſk of rot, ought to be kept for old graſs. The remainder, ſhould be put under a rotation of 3 years tillage, and 1, 2, or 3 years graſs, as follows: After the land is ploughed out from graſs, then ſow oats, next turnips, then barley, with clover and rye-graſs, to continue for 1, 2, or 3 years in

 graſs,

* Under the deſcription of arable lands, rich grazing lands or marſhes, as Romney marſh, the rich marſhes in different parts of Lincolnſhire, in the north of Norfolk, the iſle of Ely, &c. &c. are not included, as theſe lands will pay better in graſs, than in any other way in which they can be employed.

graſs, as circumſtances may require, to be paſtured with ſheep, and a ſmall number of neat cattle among them, to keep down the rye-graſs, &c. from running too much to ſeed.

The firſt year's crop of graſs ſhould be employed in fattening ſheep from the beginning of April, to the end of May, or beginning of June, (by which time, or ſooner, they may be ſold to the butcher) then kept uneaten till July, and mown for hay. Two or three weeks after, the ſheep intended to be fattened with turnips, ſhould be turned in, and kept there till they went to turnips. The 2d and 3d years are to be employed in paſturing the *ſtore* ſheep.

The white crops are always luxuriant; indeed they may be too much ſo for the ſeeds, particularly in fruitful years. To prevent which, when there is likely to be too much ſtraw, we draw the turnips off, inſtead of eating them where they grow, and carry them to the land which is intended to be ploughed for oats. The turnips ſeldom fail, eſpecially when drilled at 30 inches, and horſe hoe'd. They are certainly the beſt proviſion for ſheep in winter, while the clover and rye-graſs, are the ſureſt and beſt proviſion for theſe valuable animals in ſummer; and both are high preparations for the crops of grain, which are to follow. With the exception indeed, of uncommon rich marſhes, there is no paſturage that will ſupport ſo much ſtock, as the firſt year's crop of clover and rye-graſs. There is no graſs that will bring ſo heavy a crop of hay, and that after an early *ſpring eatage*, and likewiſe an excellent foggage after the hay. In good lands, the ſeeds ought not to ſtand above one or two years; but in weak or hungry grounds, three or even more; the latter, it is evident, not being able to bear a frequent repetition of crops of grain.

The

The above plan is adapted to dry and friable ſoils alone. It is certainly the one, that, in the courſe of years, will yield the moſt money, and make the greateſt improvement in the ſoil. By following ſuch a ſyſtem (never above one white crop being taken at once) the land is kept, to make uſe of a ſtrong figurative expreſſion, *in conſtant health and ſpirits*, by which it muſt make more profitable returns, than it can poſſibly do, by any other mode of management.

FINIS.